



Lean Startup: Why companies should embrace a Lean methodology

Maria Alejandra Roldán Correa

Politecnico Di Torino
Master in Engineering and Management
Torino
2019



Lean Startup: Why companies should embrace a Lean methodology

Presented by:
Maria Alejandra Roldán Correa

Presented to:
Guido Perboli

Politecnico Di Torino
Master in Engineering and Management
Torino
2019

TABLE OF CONTENTS

1. INTRODUCTION	8
2. OBJECTIVES	10
2.1. GENERAL	10
2.2. SPECIFIC	10
3. ARGUMENT	11
4. THEORETICAL FRAMEWORK	13
4.1. STARTUP	13
4.2. BUSINESS MODEL	17
4.2.1. <i>Business Model canvas</i>	17
4.2.2. <i>Lean Model canvas</i>	18
4.2.3. <i>Dropbox Model</i>	19
4.3. BUSINESS INNOVATION	20
4.4. LEAN STARTUP METHODOLOGY	22
4.4.1. HYPOTHESIS VALIDATION	31
4.4.2. MINIMUM VARIABLE PRODUCT (MVP)	32
4.4.3. MEASURE: LEAN ANALYTICS	33
4.4.3.1. ONE METRIC THAT MATTERS (OMTM)	36
4.4.4. PIVOT OF PERSEVERE	38
4.4.5. GROWTH	39
4.4.5.1. RIES ENGINES OF GROWTH	40
5. INVESTIGATION METHODOLOGY	42
5.1. INVESTIGATION QUESTION	43
6. ANALYSIS OF LEAN STARTUP METHODOLOGY – PROS AND CONS	44
6.1. CONSIDERATIONS ABOUT THE IMPLEMENTATION OF THE LEAN STARTUP METHODOLOGY	49
7. LEAN STARTUP IN DIFFERENT ECONOMIC SECTORS: INDUSTRY, TECHNOLOGY AND FINANCIAL SERVICES	52
7.1. INFORMATION TECHNOLOGY INDUSTRY	53
7.1.1. DROPBOX	54
7.2. FINANCIAL INDUSTRY	55
7.2.1. WEALTHFRONT	55
7.2.2. INTUIT	56
7.3. INDUSTRY AND COMMERCE SECTOR	57
7.3.1. TOYOTA	60
7.3.2. GENERAL ELECTRIC (GE)	60
7.3.3. PROCTER & GAMBLE (P&G)	62
7.3.4. ZAPPOS	62
8. DESCRIPTION OF THE CORPORATIVE ENVIRONMENT IN LATIN AMERICA SPECIFICALLY IN REGARDS OF THE IMPLEMENTATION OF INNOVATION	64
9. PROPOSAL FOR THE IMPLEMENTATION OF THE LEAN STARTUP METHODOLOGY IN LATIN AMERICAN BUSINESSES.	71
9.1. LEAN STARTUP METHODOLOGY IN LATIN AMERICAN ORGANIZATIONS.	73
9.2. HOW TO DESIGN A LEAN STARTUP PROJECT WITHIN AN ORGANIZATION?	74
9.3. HOW TO IMPLEMENT A LEAN STARTUP PROJECT IN THE ORGANIZATIONS?	75

9.3.1.	INTERNAL COMMUNICATION.....	76
9.3.2.	LAUNCH OF THE PROGRAM.....	76
9.3.3.	REINFORCEMENT TASKS	77
9.3.4.	METHODOLOGY APPROPRIATION	77
10.	PILOT IMPLEMENTATION OF THE LEAN STARTUP METHODOLOGY PROPOSAL IN A LATIN AMERICAN BUSINESSES.....	79
10.1.	FIRST STEP OF IMPLEMENTATION	80
10.2.	SECOND STEP OF IMPLEMENTATION	82
10.3.	THIRD STEP OF IMPLEMENTATION	83
10.3.1.	DETAILS OF E.S LA TORRE PROGRAM	84
10.4.	FOURTH STEP OF IMPLEMENTATION.....	85
10.5.	FIFTH STEP OF IMPLEMENTATION.....	89
10.6.	RESULTS.....	90
11.	CONCLUSIONS	91
12.	REFERENCES	97
13.	ANNEX	104

FIGURES

Figure 1: Four stages of the Startup lifecycle	14
Figure 2: Business Model Canvas	18
Figure 3: Lean Canvas	19
Figure 4: Dropbox model	20
Figure 5: Sawhney's Innovation Model	21
Figure 6: Galbraith's Innovation Model.....	22
Figure 7: Lean Manufacturing Tools	24
Figure 8: Lean Principles	25
Figure 9: Customer development	26
Figure 10: Lean Startup cycle	27
Figure 11: Lean Startup Model	29
Figure 12: Business Proposition Sequence.....	30
Figure 13: Lean Analytics: Pirate Metrics (AARRR)	34
Figure 14: Lean Metrics	36
Figure 15: One Metric That Matters	37
Figure 16: Ellis' Growth Pyramid	40
Figure 17: limitations to innovation	51
Figure 18: Companies' investment in innovation.....	65
Figure 19: Distribution of Companies' expenditures in different countries.	67
Figure 20: Distribution of types of innovation inside companies per country.....	68
Figure 21: Collaboration in companies from different countries to manage innovation.	69
Figure 22: lean startup program implementation in organizations.....	76
Figure 23: Structure of lean startup program in E.S La Torre.....	84

TABLES

Table 1: Startup Components	16
Table 2: Differences between types of Startups (internal and external)	17
Table 3: comparison of traditional firms vs. lean Startups in innovation.	45

1. Introduction

Currently entrepreneurs face the most radical changes in the economic scenario. The rise of the Internet and the proliferation of media mutation have subjected organizations to situations and internal needs that may not have generated any relevance or relevant transcendence in the 20th century. The current scenario is supported by the development of disruptive business models that have shaped new forms of consumption, which highlights electronic commerce and digital transactions. The organizations established for decades, with great brands and a privileged position in the market, have migrated nimbly to channels that could be called digital.

These conditions highlight the need to rethink the way in which value is created and offered, today's entrepreneurs must complement their ideas with the new rules of the business, beginning with understanding the client as a thinking, connected individual with limited time availability. The current market demands new methods and strategies to develop and implement new businesses, these must be coherent with digital resources, binding with the experience that represents a product or service in the buyer, because the motivations go beyond the basic function of the product or service.

Against this background, the Lean startup method is shown as a coherent resource with the dynamics of the current economic scenario and also this academic research. It is focused on offering new innovation tools for new businesses and established organizations. When we talk about Lean Manufacturing, we usually refer to the Toyota production model, and if we talk about startup, we generally refer to all those technology companies that were born in the United States (Apple, Microsoft, Google, etc.), consequently that term or concept is directly linked to the new entrepreneurs of the 21st century. Nowadays, a new concept called Lean Startup has emerged as a method of

innovation that brings the best practices of customer management, lean manufacturing and optimal development of products / services so that new and existing companies can be more agile and competitive in the market.

There is a underdevelopment or lag in terms of appropriation of new innovative methods in Latin America due to the lack of resources allocated in Research & Development, deficit in a managerial mindset, entrenched focus in productive industries of extraction and processing of raw materials, between other causes that would be described in further chapters.

Innovating is going beyond of what is traditional, considering always the customer's needs; the previous statement is the core argument of the Lean startup methodology. Ries (2011) has been a pioneer in this term that nowadays has become an attractive alternative of innovation that has been adopted by big companies such as General Electric, Procter & Gamble and Dropbox.

The current thesis aims to provide bases to Latin American firms that allow them to venture and dive deep in this new trend of innovation. To achieve the previous it was compulsory to diagnose the enterprise context in Latin America and to review examples of savings and success achieved by big corporations in several industries and market places. The necessity of extracting common actions, paths, methodologies or strategies that could be applied in the Latin American firm context regardless of the trajectory (time since foundation) or size of a firm lead to, not only diagnose and compare the Latin firm status against other firms on more developed countries, but also drive to how to apply the Lean Startup Methodology in order to obtain better productivity and profitability of the businesses.

2. Objectives

2.1. General

- Provide an implementation proposal of the *Lean Startup* methodology in organizations for the management, attraction and conservation of clients in Latin America.

2.2. Specific

- Identify the relevant elements of the Lean Startup methodology.
- Present cases and results of the Lean Startup Methodology in organizations.
- Describe the current innovation processes in Latin American companies.
- Formulate recommendations for the application of Lean Startup methodology in companies in Latin America.

3. Argument

In the past 30 years firms diverged from a model that offered only one standard product (also called T Model, which has roots from the Taylorism), having rigid corporate structures, accounting only from brand positioning, and other hoary hierarchical traditions. The boom of “dot com” companies, new social networks, globalization, software development, artificial intelligence, robots, personalized marketing, and other trends have impulse companies towards the necessity of innovation in an agile, effective and profitable way.

In the past years automotive Japanese companies recognized that they had to re-invent themselves in order to compete against competitors mostly for United States (i.e. Ford, Chrysler and GM). The first approach to the Lean concepts where first developed by Toyota in the seventies, these concepts where conglomerated in what now is known as *Lean Manufacturing*. Lean manufacturing aimed at optimizing production processes (Womack, 2003). The Proposed methodology offered a system (both productive and logistically) more efficient that intended to diminish any type of waste in the process. This methodology allowed Toyota to be positioned as the greatest vehicle seller in the world in the past years.

The basis of the Lean Startup method lies in creating the product that the customer needs and for which he is willing to pay, using the minimum amount of resources. The problem of many of the entrepreneurs who have failed is that they create a business plan, get financing, develop the product and only after creating it and launching it, the company gets feedback from customers. It is the moment in which many entrepreneurs learn that customers did not need most of the characteristics of the product or service.

In big companies, there's no shortage of new ideas, but there can be little incentive or opportunity to execute on them. That result is summarized in lots of

conversation, and very little change. Lean Startup provides a framework for evaluating and mitigating the risk of new ideas. That means a focus on customer validation and understanding the requirements of the MVP. Once those are completed, it's easy to grasp both the impact and the risk of a project.

The approach *Lean Startup* is a cycle of creating, measuring and learning; this cycle's finality is validated knowledge (Ries, 2010). The three main macro stages of this methodology are: application of the model Lean canvas including the corresponding nine steps, Customer Development and Agile Development. Although the name of the methodology has focus in business incubators or entrepreneurships, this methodology transcended and nowadays expanded the range where it is applied, encompassing big companies that ameliorate the development of products and/or services and found an opportunity to improve their customer development based on the comprehension of the market's necessities (Blank, 2006). Complementing the mentioned methodology, *Design Thinking* also adds value in enhancing the customer relations; the concept was characteristic of the creation of Apple products.

The methodology has had such a great influence and reception globally, that other firms, from different industries have adopted the term *Lean* to simplify, innovate and enhance their productive systems or their service offer. From that revolution in the management of enterprises, companies adopted the Lean Startup methodology as an innovation mechanism to develop products and/or services that are demanded by consumers (Ries, 2011)

This work intends to contribute theoretical bases on how to apply a *Lean Startup* methodology to attract, conserve and efficiently manage customers for innovative entrepreneurships or for re-inventing existing companies in the Latin American market.

4. Theoretical Framework

4.1. Startup

The term is currently used around the globe and has become a trend thanks to the expansion of new technology-based companies. A startup is a small or medium company of recent creation and usually related to technological products or services. It is demonstrated that the more and greater experiences, good or bad, in the development and evolution of a startup, more and greater would be the apprenticeship and continuous learning, that in the end would translate in better results in and from the processes. A startup is created from an innovative business idea, based in a product or service, and with the knowledge and collaboration of one or more partners (Ries, 2011).

For instance, an academic research “Eight Paths of Innovations in a Lean Startup Manner: A Case Study” summarised the lifecycle of an innovation in the following 4 steps. The four stages form a value chain: No idea creates value until you embody it in a product or service; no product or service captures value until you embody it in a business model and pricing strategy; and no business model becomes sustainable until you figure out distribution. (Raatikainen et al., 2016):

Figure 1: Four stages of the Startup lifecycle



Source: (Mohout, 2015)

- *Idea stage: The innovation program should focus on gaining a detailed understanding of the problem or need that it wants to tackle. At the end of this stage, the startup should have a holistic understanding of the problem domain, and a minimal viable product (MVP) or concept to initiate its validation with real customers and users.*

Ideas are handled as hypotheses that need to be validated using the MVP to collect customer feedback. The primary goal in this stage is learning (Raatikainen et al., 2016, page 2).

- *Problem/solution fit: In this stage, the innovation program or process should focus on further developing the concept as an optimal solution for the first lead users and customers. The MVP offers a path of very rapid iteration of customer requirements followed by testing and validation. This stage was called 'going from 0 to 1' by Peter Thiel in 2014.*

Experimenting with (innovative ways of) customer acquisition is the second key activity of this stage (Raatikainen et al., 2016, page 2).

- *Product/market fit: Once the optimal solution for the lead users is ready and the innovation program has been able to acquire new customers and users, its focus should move to customer retention and further generation of the business model.*

In this stage, the innovation program should particularly focus on retention, the business model, and a pricing strategy (Raatikainen et al., 2016, page 3).

- *Scaling: When the innovation program has found a scalable business model, the focus should shift to actual scaling. In this stage, the innovation program should focus on accelerating the business. The acceleration typically requires large investments in marketing and business development. This stage is called 'going from 1 to n' by Thiel (Raatikainen et al., 2016, page 3).*

The business plan is a key element to evaluate the concept of the business in a methodical and effective way; through it an idea is progressed and structured into a new business. This progressive path entails decreasing the risk that entrepreneurs face when they start their new firm. Additionally, startups have an objective, a goal that is to create a successful company that changes the world. This goal is the vision of the startup. To achieve the vision, startups implement a strategy, that must include a business model, a map of products, and a clear approach regarding partners, competitors and ideas of how to segment the market (define consumers) (Ries, 2012).

The innovative aspects is a fundamental part that develops a business model from original ideas that have the aim to cover needs with a new offer that is not yet available in the market or that has been incorrectly developed. Technology is an essential ally considering that we talk about innovative business models, with a global and scalable ambition.

Nowadays, startups focus their business model in Blue oceans rather than in red oceans in the market. A Blue ocean is a new uncontested market within the same industry. For instance Cirque Du Soleil re-invented the whole circus concept aiming primarily at a different audience, giving more importance to acrobatics rather than clowns, or removing animals from the show; but yet it is a circus. In the other hand a Red ocean is a very contested market where the rivalry is high and it is difficult to innovate or stand out.

Startups are characterized by being young and creative corporations, multidisciplinary and with a strong innovative component, firms where the direct contact with the customer is fundamental to cover their necessities. In Table 1 and 2 there are a more detailed description of the common components and the difference of them depending on the type of startup. All their characteristics and components make this type of businesses one that constantly learns from mistakes, which allows them to have an ability of continuous growth.

Table 1: Startup Components

Startup component	Characteristic	Description
Institution	Lack of resources	Economical, human, and physical resources are extremely limited
	Small team	Start with a small numbers of individuals
	Low-experienced team	A good part of the development team is formed by people with less than 5 years of experience and often recently graduated students
	New company	The company has been recently created
	Flat organisation	Usually founders-centric and everyone in the company has big responsibilities, with no need of high-management
	Not self-sustained	Especially in the early stage, startups need external funding to sustain their activities
Innovation	Little working history	The basis of an organisational culture is not present initially
	Rapidly evolving	Aim to grow and scale rapidly
	Third party dependency	Due to lack of resources, to build their product, startups heavily rely on external solutions
	One product	Company's activities gravitate around one product/service only
Extreme uncertainty	Highly reactive	Able to quickly react to changes of the underlying market, technologies, and product
	Time-pressure	Release fast and work under constant pressure
	Highly risky	The failure rate of startups is extremely high

Source: Edison et al. (2015)

Table 2:Differences between types of Startups (internal and external)

Component	External startup	Internal startup
Institution	Lack of resources, small team, low-experienced team, new company, flat organisation, not-self sustained, little working history	High-experienced team, controlled (operates in the approved business case), full of resources (including monthly salary)
Innovation	Rapidly evolving, third-party dependency, one product	Targeting on new market segment (fear of cannibalising)
Extreme uncertainty	Highly reactive, time-pressure, highly risk	Breaking the law, highly depends on the corporate strategy (controlled)

Source: Edison et al. (2015)

In other words, a main goal of a startup is to discover what to produce, based in close knowledge of the customer's buying intention (what they want and how much they are willing to pay). Nevertheless, any business initiative has risks. Risks can conclude in failure, and this state has always been demonized because of the consequences that usually impact the entrepreneur. The raw truth is that 75% of the startups founder (Xavier, 2012).

4.2. Business Model

Peter Drucker first described this concept in "The practice of management" (1954). According to the author, a good business model is one in which it is very clear who are the clients and what they value, and also delimit and explains how to create that value at an appropriate cost (Gonzalez, 2017). The design process of the business model is a part of the business strategy since it deepens in order to contribute innovative value proposals. An appropriate business model is an efficient contributor to the success of the company in development.

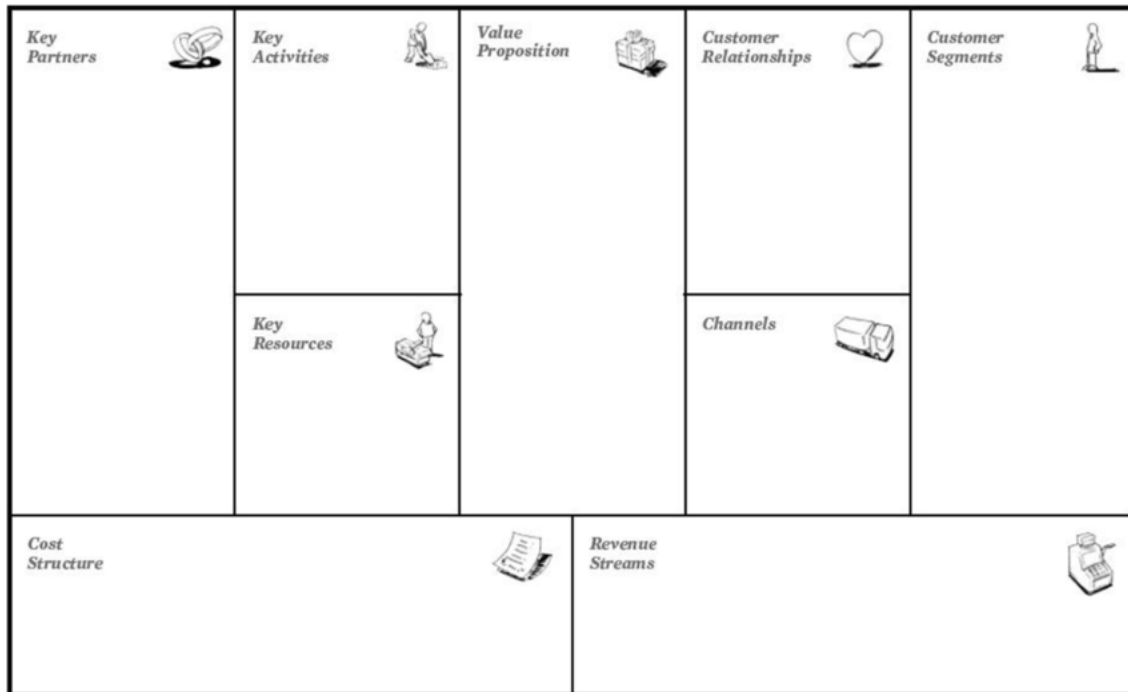
There are different methodologies that result in the design of a business model; three of the most important are: Business Model Canvas, Lean Canvas Business Model Canvas and Dropbox model.

4.2.1. Business Model canvas

This business model by Alexander Osterwalder is the most known globally; is consists of nine (9) basic modules, where the main business variables are

contemplated. The nine modules are the main aspects of the four principal areas of any business: clients, offer, infrastructure and economical feasibility.

Figure 2: Business Model Canvas

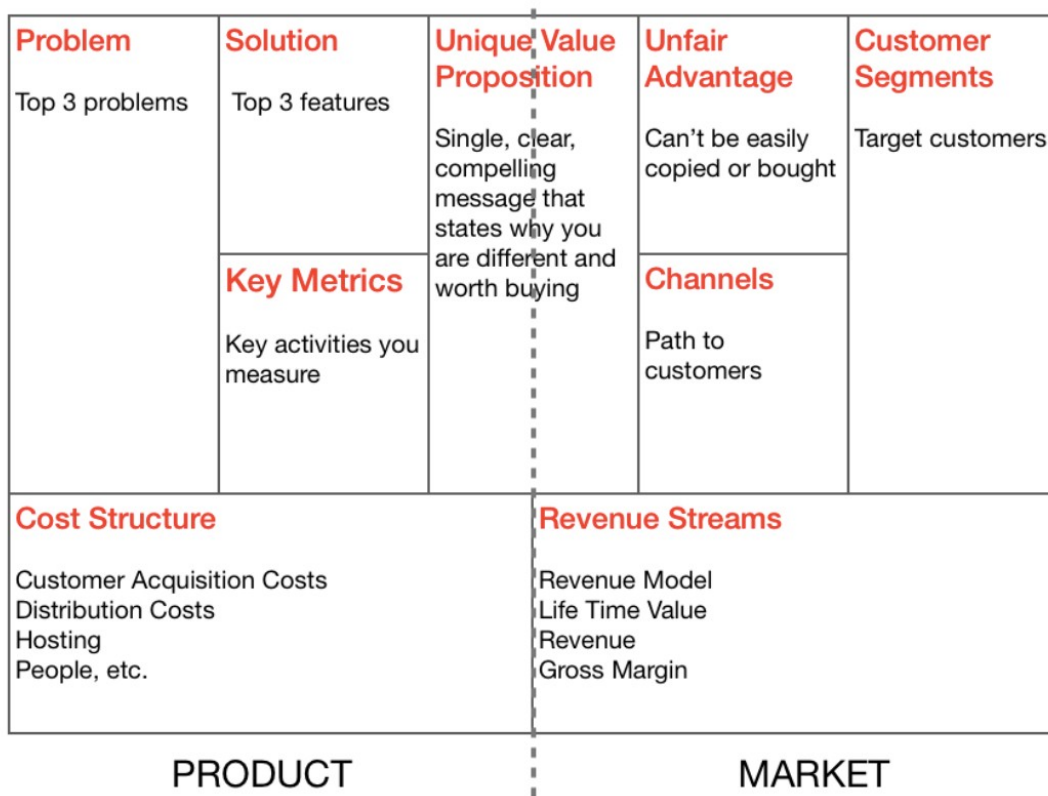


Source: Alexander Osterwalder's model canvas (González, 2017)

4.2.2. Lean Model canvas

Ash Maurya created this canvas; it aims to develop an itinerary that helps entrepreneurs, from the incubation of an idea until the creation of the startup or business. The canvas purpose is to express what is more ambiguous or risky. According to Maurya, Osterwalder's canvas lacked fields where more risky hypothesis were deployed and also fields like key partners or key activities were dispensable for a business model of a startup; that is why he modified it (Macías, 2015).

Figure 3: Lean Canvas

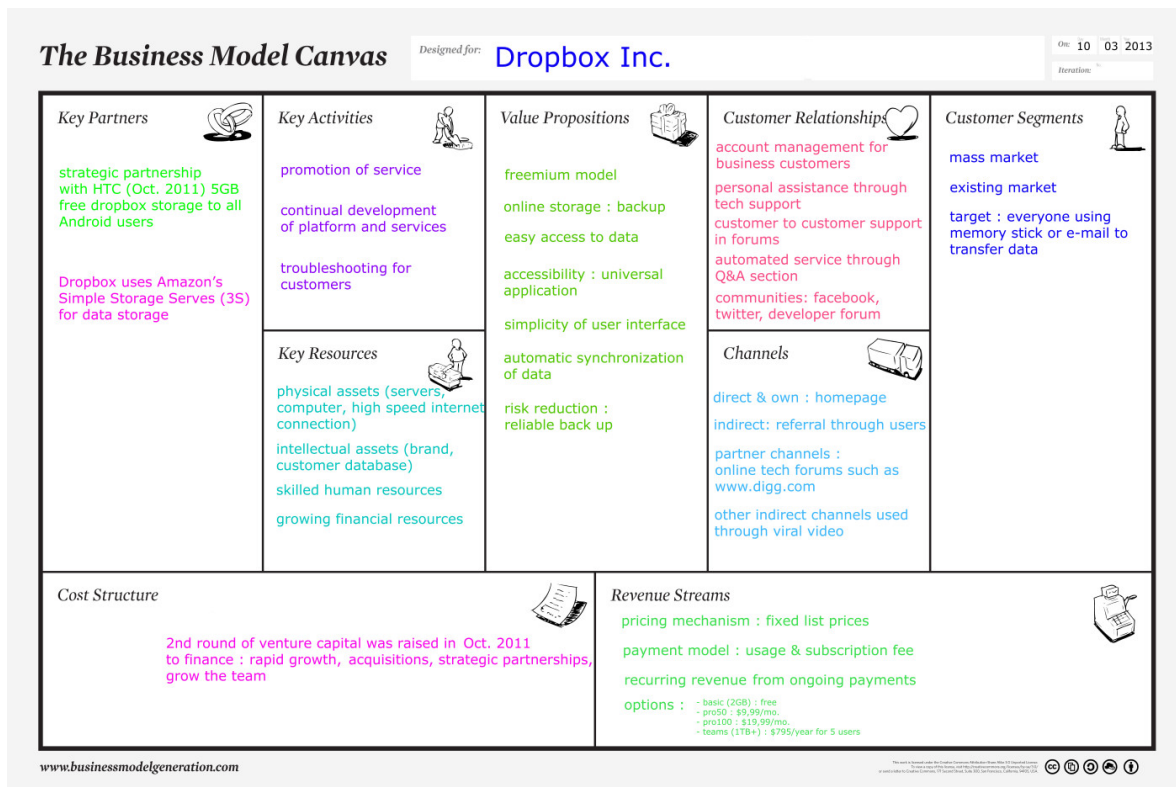


Source: Alexander Osterwalder's model canvas (González, 2017)

4.2.3. Dropbox Model

This methodology to represent businesses has been widely used by several successful well-known companies around the world such as: Apple, Skype or Dropbox. For the sake of achieving a better comprehension of this tool, the Dropbox business model is represented in the following figure.

Figure 4: Dropbox model



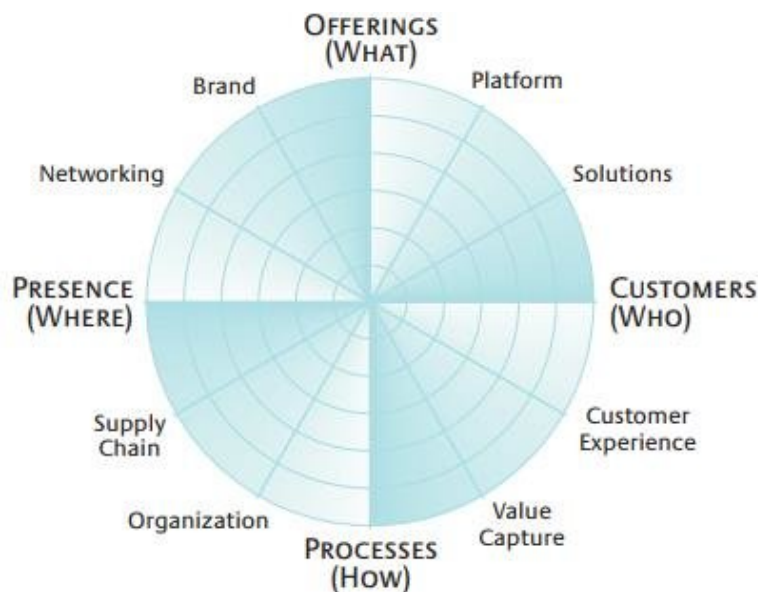
Source: <https://www.cleverism.com/company/dropbox/>

4.3. Business Innovation

Innovation is nowadays one of the most important pillars of corporative management. In 1942, Schumpeter affirmed that a process of creativity destruction or obstruction leads products to enter in a stage of decline (even when it did not even went through the stage of maturity in its lifecycle). This caused the disappearance of both products and even companies that where no longer able to compete. At the same time, it brought alive new products or companies that used for instance new methods or materials to enhance customers need satisfaction (Schumpeter, 1942). Ever since that, the theory of innovation management highlighted the importance of innovation (Tidd et al, 1997).

Enterprise innovation is creating substantial value to clients and the company through the creative modification of one or more areas of the business system. Mohambir Sawhney (2006) explained twelve paths to follow to develop innovative projects in his *innovation model*; these twelve dimensions of the projects would therefore contribute to the effective comparison of different companies. Accordingly, in an environment controlled by big companies, business competition and technological development, innovation is essential for corporative success.

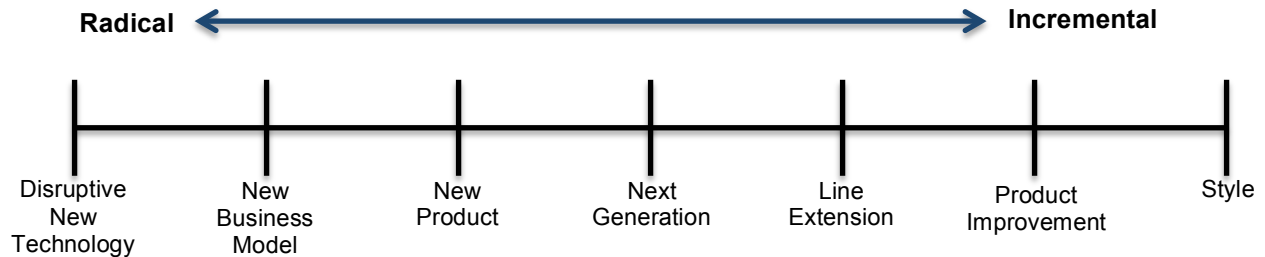
Figure 5: Sawhney's Innovation Model



Source: Sawhney et al, 2011

Another approach to analyse the innovative approach of a company is *Galbraith model* (1992) that provides a useful spectrum for innovations, ranging from incremental up to radical.

Figure 6: Galbraith's Innovation Model



Source: Karlsson (2012)

Finally, is useful to think of innovations as sustainable or disruptive. Christensen (1997) refers to the first as the answer of a company to the evolutionary changes in its market, while the second is the revolutionary change in the market.

Also, Tushman and Anderson (1986) distinguish between innovation that enhance competition and the innovation that destructs rivalry.

4.4. Lean Startup Methodology

Ries found in the production system of Toyota, called Lean Manufacturing one of the fundamental bases, which applied to innovation, would later derive into the Lean Startup methodology. The goal of Lean manufacturing is to boost and optimize any productive system through reduction or elimination of all the activities that do not generate any added value; understanding the term "value" like everything that creates benefit for the client, hence everything that oppose to the previous statement, and does not turn into value or benefits is a squandering (Llamas and Fernandez, 2018).

The lean Startup methodology is based in the methodology of costumer development this was described by Steve Blank in his book "*The four steps to*

epiphany: successful strategies for products that win (2005)”, and Eric Ries in *“The Lean Startup Methodology (2011)”*. Blank pointed the difficulties that resulted of a limited emphasis in the development of a product; he also argued that emerging companies should majorly focus in mastering “customer development”, that is learning about clients and their problems as soon as it is possible in the development process.

“My belief is that these Lean startups will achieve dramatically lower development costs, faster time to market, and higher quality products in the years to come. Whether they also lead to dramatically higher returns for investors is a question I'm looking forward to getting answered.” – From the very first blogpost on *Lean Startups* (September 8th, 2008).

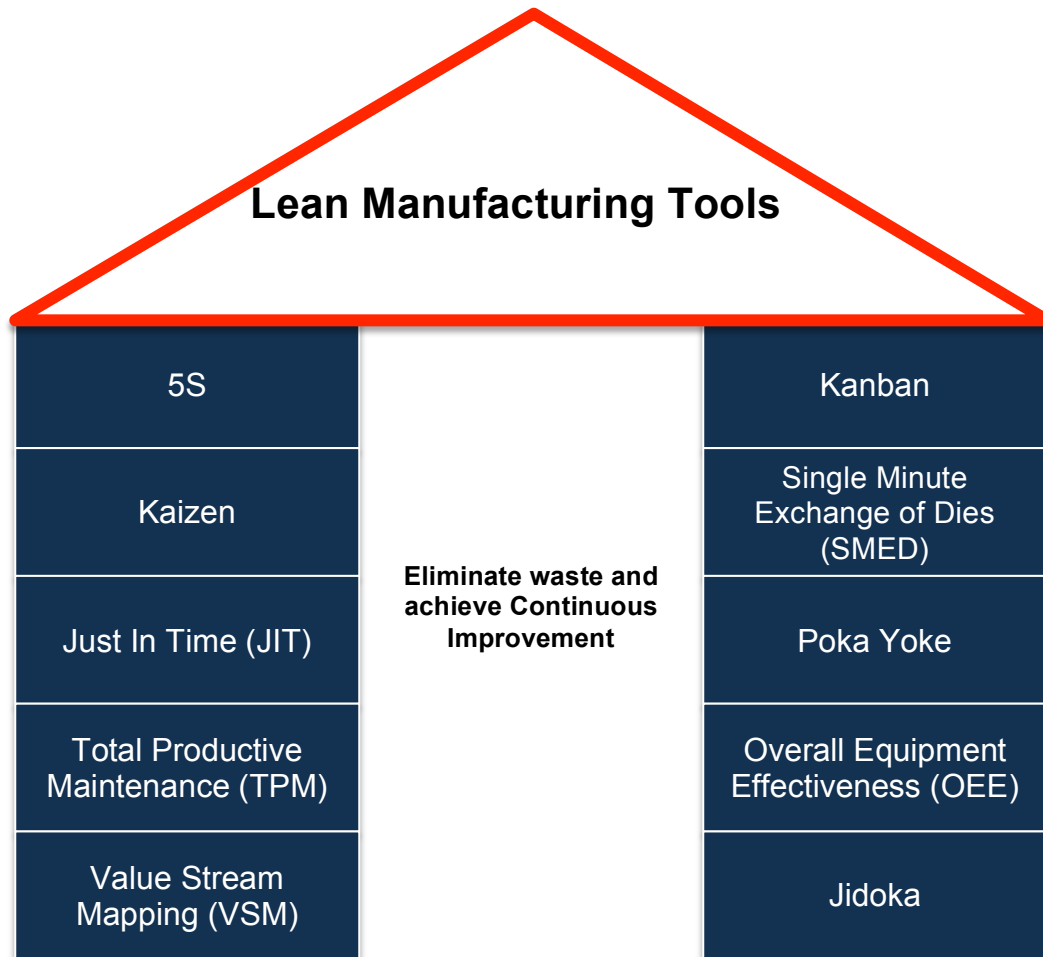
Lean Startup methodology is a set of practices that aim at helping entrepreneurs to increment their possibilities of creating a successful startup. It is an agile method, client oriented and focused in reducing risks since it is based in scientific investigation to prove strategies that companies want to carry on with, allowing them to know if they are good or bad before investing a lot of time and capital in developing a product or service that no body wants (Ries, 2011).

Ries (2011) developed this methodology based in three main pillars:

- Lean manufacturing philosophy: (adapted to their own ideas). Startups work in extreme uncertainty where a priori they don't indeed know who would be their customers, what they really need, and consequently what generates value for them. The aim is reducing that uncertainty.

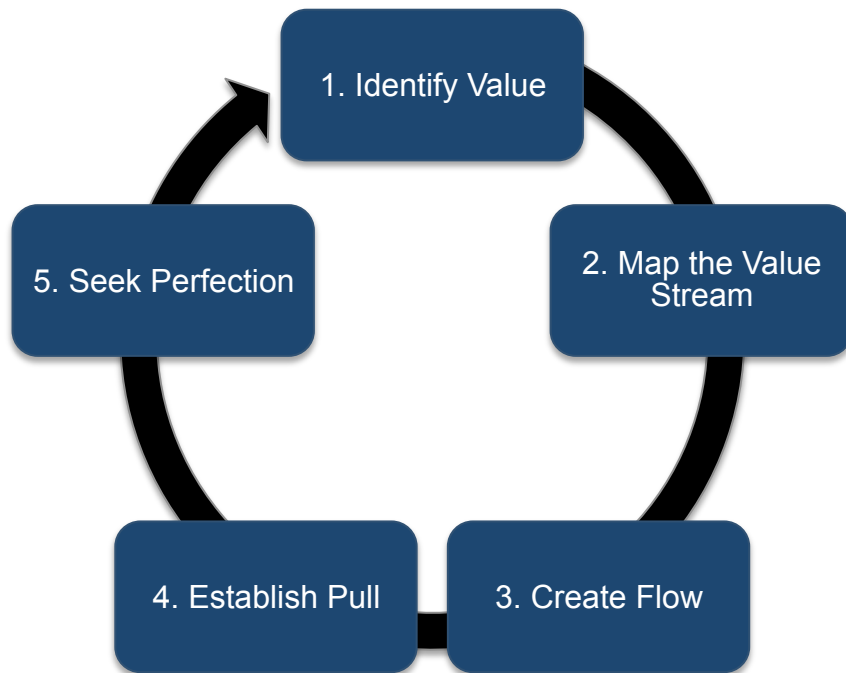
As shown in figure 7 and 8, the first principle is a specific value created by the producer from the client's point of view, and can be achieved through a group of tools proper of this methodology. Moreover, the continuous improvement would disembugue in the achievement of the perfection that is sought.

Figure 7: Lean Manufacturing Tools



Source: Vinodh, S. & Ruben R. (2015)

Figure 8: Lean Principles



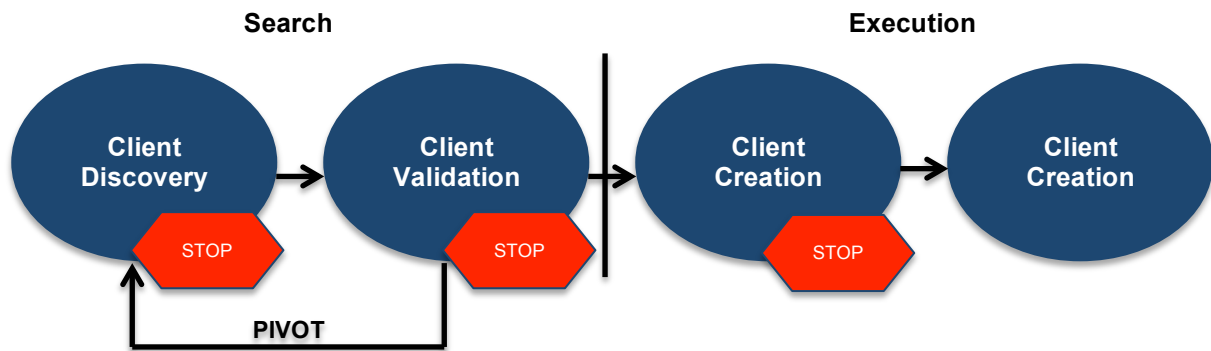
Source: Lean thinking – 5 Lean Principles (Eaton, 2013)

The previous steps allow flow and suppress what does not generate any value. The third principle is flow and it is a group of steps that creates value for clients. This phase is followed by the pull stage; this stage is implemented after the flow stage and it allows clients to gain value from the product of the firm. The fifth principle is perfection; that entails that the process do not have an end, after it the cycle would restart and continue until a condition where the total value is produced without waste.

Having constant contact and dialogs with clients conveys to specific ways of finding value with greater precision, and in some occasions it also leads to learning new ways of improving the flow and the attraction. (Womack et al. 2003, 16-25)

- Customer Development¹: methodology that implies getting to know the client, thus studying deeply the market to identify what it really want and need, and consequently be able to design a product or service that meets their expectations.

Figure 9: Costumer development



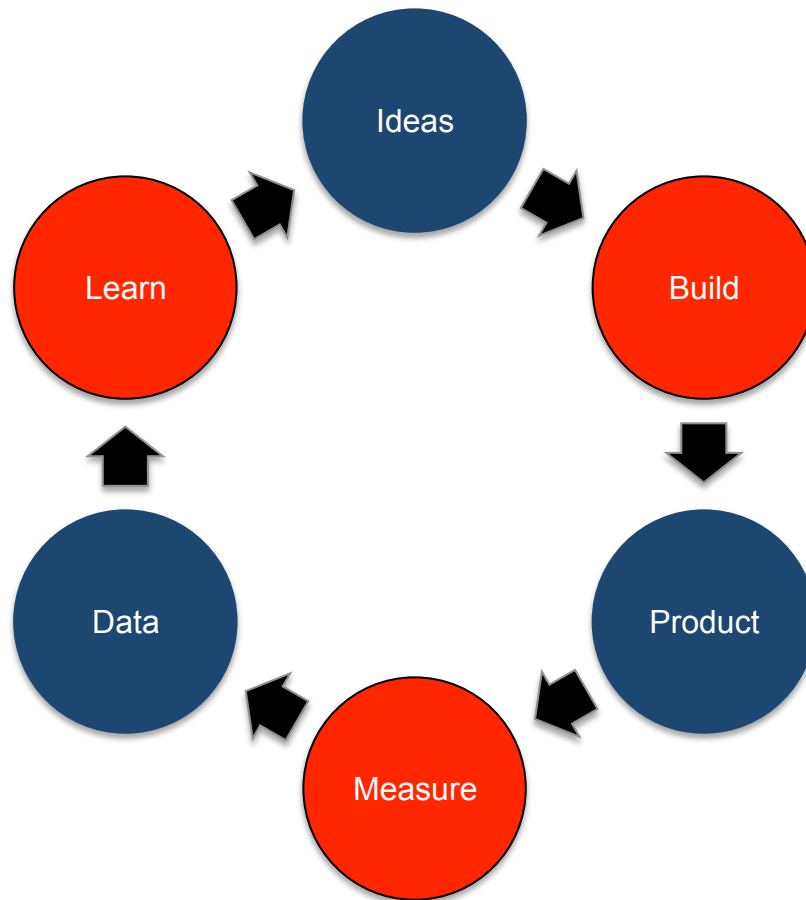
Source: Gustafsson, A. (2012) based on blank's model (2013)

- Methodology of agile software development: Programming technic that consists in dividing a project into small tasks that can be executed in short term time cycles. This allows results to be delivered on time to prove if expectations are met and to promptly implement possible corrections in the next cycle of the project.

Considering the three previous mentioned dimensions, Lean Startup methodology is centred in a circuit of three steps that must be accomplished in the minimum possible time and with the minimum investment ("work smarter not harder" – Allen F. Morgenstern, 1930). Begin with creating a product, measure results and learn from them (figure 10).

¹ Methodology developed by Steve Garry Blank in his book "The four steps of epiphany", 2007

Figure 10: Lean Startup cycle



Source: Ries (2012)

- **Building:** when a startup is launched, there is not enough data to create a product that perfectly fits into the clients' necessities, therefore, it is ideal to create a Minimum viable Product (MVP). An MVP is a product with just enough features and functionalities to satisfy early costumers but leaves open a window for feedback and future product enhancements through validated learning through clients.
- **Measuring:** the biggest challenge in this stage is to measure how clients respond to the product, collect that data and take the appropriate decisions.

- Learning: the cycle of Lean Startup allows entrepreneurs or firms to learn if a business is viable/feasible, and based on it persist or otherwise pivot in order to readjust substantially the ideas that are not working.

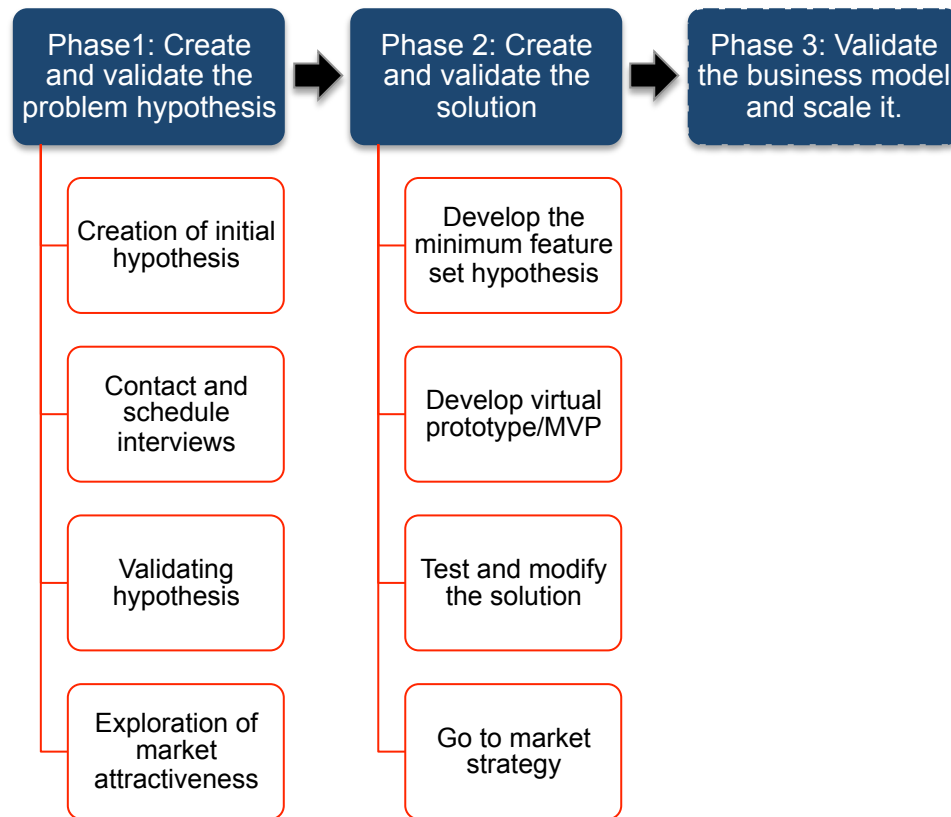
The Lean Startup methodology's proposal is providing innovative ideas through the previous agile and dynamic cycle where the entrepreneur or the business man, once established their hypothesis and suppositions, starts validating them through experimentation (that is the MVP).

A startup or a company creates products, measures results and learn from them. In other words, is an iterative process of transforming ideas into products, measuring the reactions and behaviours of clients towards the product and learning either from persisting or from pivoting. This process is repeated continuously (Ries, 2011).

The main objective of using this methodology is obtaining validated knowledge; that is to say, knowing what elements from the strategy work and discovering what is that the consumer wants. This acquirement grants the possibility of measuring the progress of the startup and discovering if the business model is plausible, profitable and scalable; fundamental characteristics and pillars that must be achieved by a startup in order to become a corporation (Ries, 2011).

Finally in figure 11 and 12 deploy the process of Lean Startup with their corresponding sub-activities; it starts with the creation of a hypothesis and finishes with the validation of the model and the pivoting. This last step is a consequence of learning from the behalf of the entrepreneur or businessman where he recognizes that he must re-shift his business; that re-shift has the propose of avoiding being trapped in a process that consumes resources in a poorly or not optimal way, generating a risk for the company of either not growing or entering in a decline stage (Dying).

Figure 11: Lean Startup Model

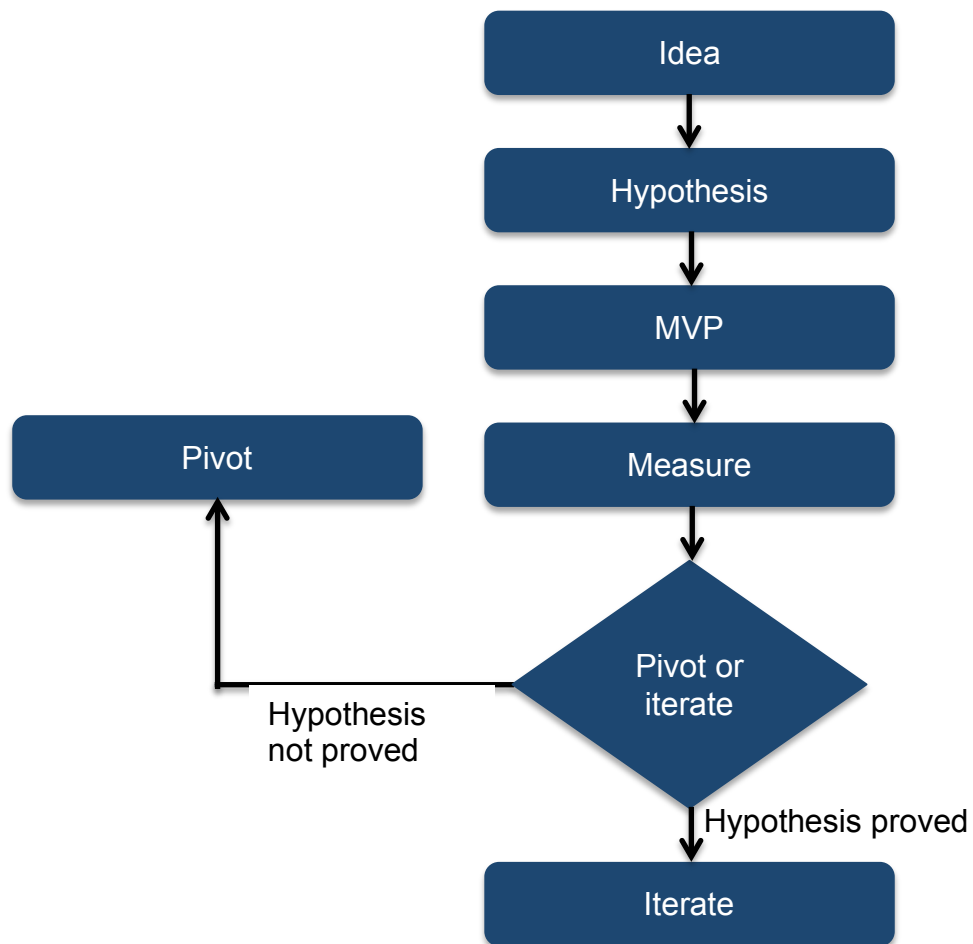


Source: Gustafsson, A. (2012)

As evidenced in figure 11 Gustafsson's proposal focused on an initial validation of a hypothesis and ended with the escalation of it in the market. This 3-phased process is strongly complemented by Ries (2011) and Blank (2006); Ries stated that the initial hypothesis is a result of the entrepreneur's vision and how it is better than current solutions to a customer's problem. Complementing Ries statement, Blank previously affirmed that the initial hypothesis, thus the hypothesis to which Ries refers, could only be re-stated/changed based on empirical evidence.

In other words, the sequence to achieve the phases proposed by Gustafsson is better explained by the process proposed by Llamas and Fernandez in 2018, deployed in figure 12.

Figure 12: Business Proposition Sequence



Source: Llamas and Fernández (2018)

The cycle create-measure-learn is the core of the lean start up methodology (Ries, 2013). A startup has to create products, measure results and learn from their analysis. In other words, is an iterative process in which ideas are transformed into products; reactions and behaviours of clients against products is measured; and there is always improvement in knowledge/learning whether there is perseverance or there is always pivoting. This process is continually, non-stop repeated.

The sequence is initiated with the first crucial element in the approach of the business: the hypothesis, this are the assumptions over which the entrepreneur relies the viability of his idea. In order to prove the hypothesis, the entrepreneur would rely in the MVP with which he will experiment, and most importantly he will learn from his objective clients; therefore, it is important to measure reactions and analyse them in order to take opportune decisions that imply corrections over the initial hypothesis. Those corrections might require changes not only in the products, but also in the restructuration of the business model (also called pivoting). However, collected data not always result in substantial changes, data might also carry or suggest to persist in the current product and/or business model, situation in which the continuous iteration would focus in creating incremental versions of the product that can be validated from the clients experience.

4.4.1. Hypothesis validation

Behind every idea and its consolidation, there is always and intuition, a thought that it would be successful, otherwise it would not be worth it to invest time, money and effort in it. Notwithstanding, not all the ideas are successful, instead only few ideas flourish and succeed. The toughest part about starting and holding on to any project, especially when it is something innovative, is the uncertainty that it embroil. Projects are based over several suppositions, expectations and not proven facts, that in Lean Startup methodology are called hypothesis and it is extremely important to prove them prior to the launch of the business, with this waste of time and resources can be avoided (Ries, 2013).

Javier Megias (2013), well known entrepreneur, defines a hypothesis applied to business in a very illustrative way in his blog: *“hypothesis are those facts that we consider as true in our business model but that we cannot be 100% certain of”*. Blank and Dorf in 2013 stated that *“hypothesis is just a fancy word for -guess-”*. The same authors suggest that when starting an entrepreneurial route it is

important and indispensable to begin from a business model that helps to establish the hypothesis and prove the suppositions; for this the authors suggest the lean canvas of Osterwalder (figure 2) as starting point.

4.4.2. Minimum variable Product (MVP)

One of the best ways of validating the hypothesis is through the construction of and MVP; this is a version of the product that allows or warrants the cyclic process of create-measure-learn, with a minimum effort and in a minimum time. The MVP is one of the most important techniques of Lean Startup; Ries defines it as “A version of a product which allows a team to collect the maximum amount of validated learning about customers with the least effort” (2009, p.91).

Blank and Dorf in 2013 defined MVP as “a concise summary of the smallest possible group of features that will work as stand-alone product while still solving at least the core problem and demonstrate the product’s value”. MVP helps entrepreneurs to start with the process of learning as fast as possible and its main purpose and aim is to prove the fundamental hypothesis of the evaluated business.

The first product of a startup is not directed to satisfy public in general. Startups cannot afford to create a product that contains all the characteristics from the beginning hence, the first efforts are focussed in a small group of people, also called early adopters. These are the clients that want to be the first and are willing to adopt a product or service in its initial phase. These are visionary clients with high interest and trust in the product (Rogers, 2003).

To build a minimum variable product there is not an exact formula. What is important is that the product permits the entrepreneur to know it’s viability; in other words, MVP allows him to determine if the product has a future or not. The importance is highlighted by Cooper and Vlaskovits in their book the lean

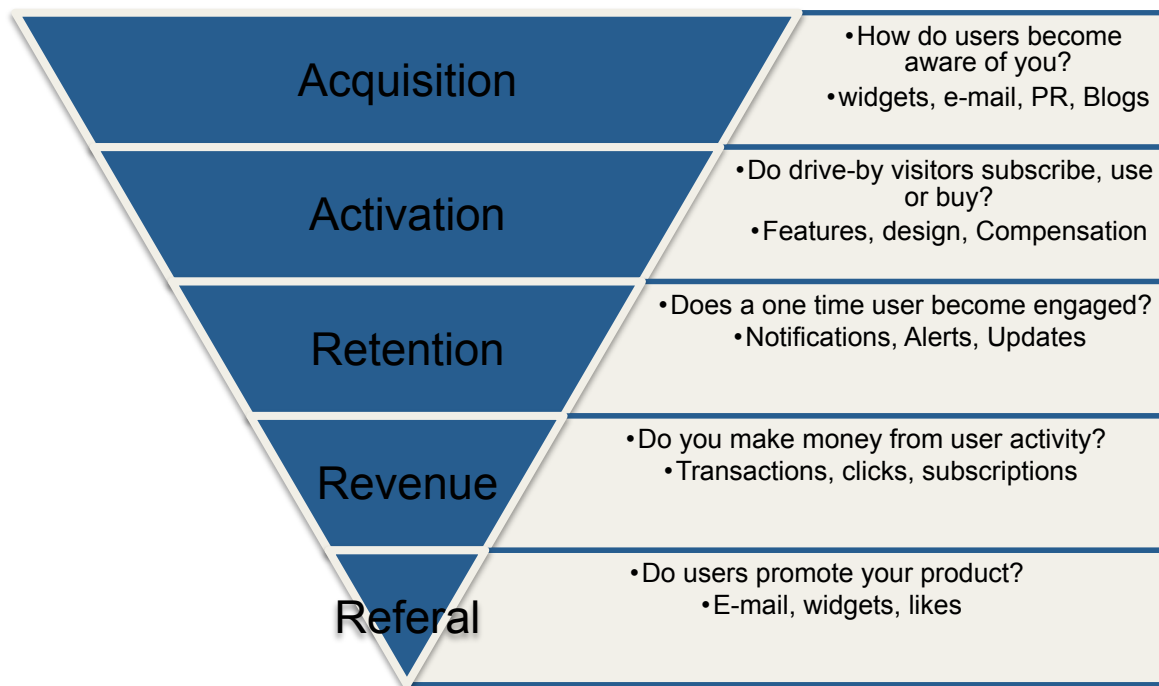
entrepreneur: how visions create products, innovate with new ventures, and disrupt markets; in page 183 in the section of MVP viability experiments the authors state that the design of an MVP is fundamental to know its viability prior to the products construction and of course mass production.

4.4.3. Measure: Lean Analytics

In order to achieve a correct and accurate counting of innovation, learning and to take unsurpassed and more rigorous decisions it is compulsory to be able to measure the process. For the previously mentioned purpose there are several frameworks developed in order to analyse the performance of the business; however one of the most known (the pirate metrics) attempt to the measure the amount and ability of the business to convert clients; the engines of growth.

As previously mentioned the clearest route is to follow the path of the conversion funnel defined by the pirate metrics. These metrics where adopted by Dave McClure (2010), member of the entrepreneurs of 500 startups, one of the main hubs of startups know for busting the growth and launching of several important firms in the United States of America. This methodology is defined as a “pirate methodology” since the initials of the five blocks of the funnel are A.A.R.R.R. (Acquisition, Activation, Retention, Revenue, Referral) (Figure 13), read as the assumed yell of this characters.

Figure 13: Lean Analytics: Pirate Metrics (AARRR)



Source: McClure (2019)

In a practical and simple way, the funnel adopted by McClure in 2010 will follow the following sequence:

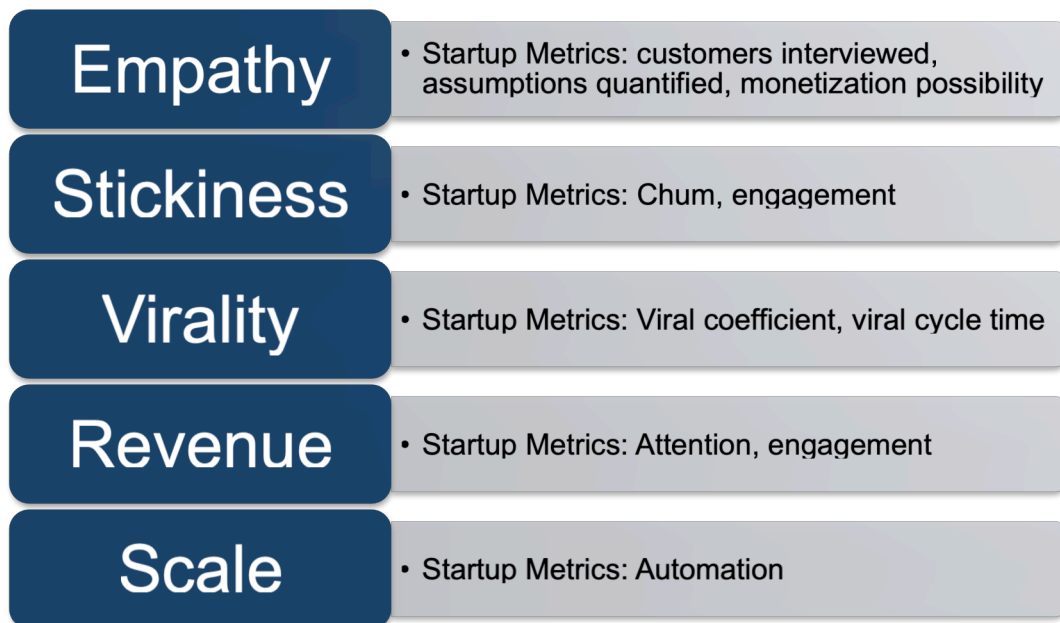
1. Acquisition: Answers the question of: how does the client or user get to know the offer of the business? To answer this interrogation, it is therefore important to determine the acquisition channels and the related costs in case that either a SEM (search engine marketing) campaign, a mailing or other type of offline activities (example: publicity in a fair) were developed. It is essentially the way and instruments used to create attention.
2. Activation: According to Megias (2013), it is all about transforming a potential interested into a potential client. This stage measures the percentage of potential interested that have evidenced somehow that they

can be transformed into potential clients. For instance, people that have fulfilled a form, subscribe to a platform or register in an app. This stage evidences the capacity of awakening interest in order to encourage people to re-contact. The stage is also related with the experience that he or she had. In order to numerically measure it, divide the activated users (i.e. those who downloaded the app) by the total number of acquired users.

3. Retention: (Engagement), In a very colloquial way, is how much the client is hooked or trapped by the product or service. Answers to: is the client coming back? Thus, it is essential to understand what is behind the client's fidelity or his/ her abandonment. Some relevant metrics are engagement, time since last visit, daily or monthly active use, etc.
4. Revenue: is the business outcome. This indicator facilitates or permits to know to what percentage of the clients we have been able to sell or to receive a monetary retribution versus the total amount of clients to which we have been able to awake interest. It is a very important metric since it allows the entrepreneur to know and quantify if he is able to monetize, and therefore make profitable his business model. To calculate the percentage of conversion, the number of transformed clients (those who already invested, paid or in general bought our product) must be divided by the total amount of acquired clients (conversion rate).
5. Referral / Reference: This metric indicates the number of clients that come for recommendation or virality. Usually, the client referred does not have a cost and that has a significant influence in the decrease in the acquisition costs of clients. This metric can be tracked counting the number of invitations sent, or viral coefficients.

Moreover, there are other metrics equally important that serve also to assess the situation of the business and its relation with clients. Other five categories to measure the startup are empathy, stickiness, virality, revenue and scale; together are better described in figure 14.

Figure 14: Lean Metrics



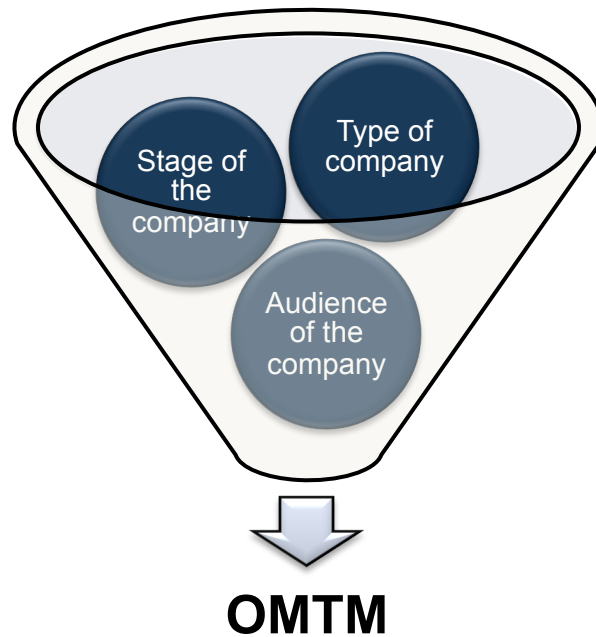
Source: Berkeley (2014)

4.4.3.1. One Metric That Matters (OMTM)

Also in concern to the measurement of the innovation and its performance some authors such as Ben Yozkovitz state that every innovation company or incubator should have a OMTM; this entails that from the beginning of the company all the way to the moment when it dies or is sold the firm should always take good care of this measurement. However, it does not mean that the firm should only take care of this metric but that this is the metric that the firm should care of the most.

The establishment of that OMTM is not generic, not even for companies within the same industry; in fact this metric relies in three main dimensions shown in figure 15.

Figure 15: One Metric That Matters



Source: Author elaboration

From the previous figure it is evident that in order to establish OMTM companies must always take care and be sure of:

1. What type of company they are? For instance transaction, collaborative or media. In most cases the companies do not only belong to one type a good example of this is Amazon, which can be considered transactional, retailing, or media.
2. What stage they are at? To determine the stage it is also useful to be sure if 1st people is aware of the initial product/service hypothesis; 2nd The

hypothesis synchronized with the potential client's need; 3rd the product / service production is efficient; 4th the business model is right / optimal.

3. Who is the audience?

The main beneficial consequence if that OMTM is that applying a lot of effort on it and paying it a lot of attention makes that first objective of improving that one outcome almost granted; and it will also evidence the next aspect to care the most about and where to re-establish or re orient the next OMTM.

4.4.4. Pivot of persevere

All the elements that have been developed up to this moment are imperative elements for the lean startup methodology these are: establish a hypothesis, create an MVP, measure it and learn from it. These elements have a purpose as they respond to the following question: Enough improvements have been achieved that lead to believe that the hypothesis is correct or is it necessary to develop some relevant change? This change, according to Rice is called "PIVOT", defined by the author as an structured correction designed to prove a new basic hypothesis about the product, the strategy and the growth engine (2012). Rice continues saying that a pivot requires that a foot remain hooked in everything that has been learned to the moment, while a fundamental change in the strategy is done in order to search and achieve a major validated learning.

Thus, pivoting is done as a consequence of a learning in which the entrepreneur acknowledges that he has to aim to a new twist to his business if he does not want sink or be trapped, consuming resources, while the business is in risk of not growing or what is worse in risk of dying before maturing. To continue with this analysis Rosa Alnasser (2015) wisely stated an important and mandatory interrogation: when to pivot? Alnasser manages Lean Monitor, a simulation tool to train entrepreneurs in the design of their startup, based in her analysis and the data collected she also stated that the ideal moment to pivot is when the

entrepreneur realizes that his statement is not valid. Alnasser says that the key is acquiring empirical evidence necessary to determine the need or not to pivot at the earliest in order to avoid or diminish the possibility of losing time and or money. Consequently, it is highly important to identify the hypothesis and experiment with it with the objective or aiming at validating or invalidating them.

As a consequence of the phase of pivoting or persevering, we could assert that the pivot answers to the necessity of being productive and it implies re-assessing and re-evaluating what we have been doing in the business in order to find a more positive perspective or future. It is Imperative to learn in time without abandoning the business; as said before always with one foot hooked, learn to re-orient the business.

When data obtained suggest persisting, the entrepreneur must continue with the creation of incremental versions of the product or service.

The main objective of this methodology is obtaining validated knowledge, knowing which elements of the strategy work and determining what does the consumer wants and needs. This learning will avow the progress of the startup and the accurate determination of the viability, profitability and scalability of the business.

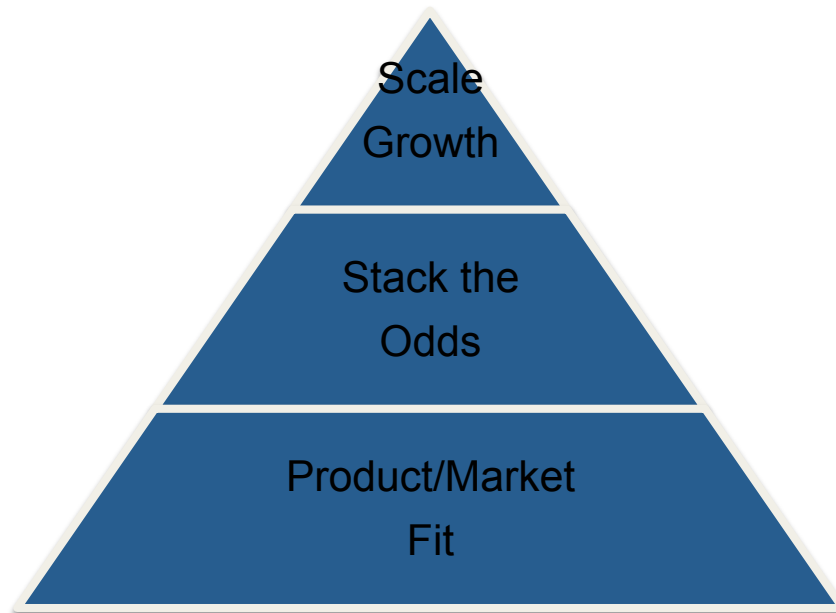
4.4.5. Growth

Once the path in which the entrepreneur must persist is determined in the previous phase; it is important to determine in which way to grow before misusing budget since sometimes it seems to be impossible in a highly competitive market. In this aspects two frameworks were developed, Sean Ellis Growth Pyramid and Ries engines of growth.

The growth pyramid represented in figure 15 mainly aims in the further macro steps once the entrepreneur has finished pivoting. In the second level of the pyramid (stack the odds) Ellis suggest the entrepreneur to find the advantage

and to exploit it in order to reach the third level (scale the growth) where the business must focus on expansion, either in new products, markets or channels.

Figure 16: Ellis' Growth Pyramid



Source: Ellis (2009)

4.4.5.1. Ries engines of growth

Moreover and complementing the previous statements of growth for the startup Ries proposed three engines. Entrepreneurs must focus on one of them in order to achieve a sustained growth. The three engines are:

- The Sticky engine: this engine aims in capturing clients for the long term; under this condition it is primordial to maintain customers coming back in a time loop (for instance every month). Under this circumstances; once you have a stable clientele the entrepreneur only need to attract few customers in order to keep his business developing. Having stated the previous it becomes obvious that the main KPI of the engine is customer retention (main focus on current customers), and this retention can grow if clients create value for themselves as they use the product or service.

- The Virality Engine: this engine is related to the number of users that a current user is, will or can potentially attract. This engine relies on customer experience; good experience will increase virality, which means that the client will do the advertising.
- The paid engine: maybe the most common engine, where advertising is a transaction and customers get to know the product by publicity. However, it is risky since a previous analysis must be done in order to be sure the cost of advertisement per person is not higher than what they are paying for and that in the end from his payment there will still be a profit.

The three previously described engines can be applied to startups and incumbent businesses how ever the author (Ries) recommends that for startups only one of the engines is used at a time and that as growth in a further and more developed stage of the business more than one engine can be used.

5. Investigation Methodology

According to Bryman and Bell (2007), there are two main approaches for the investigation; these are, quantitative and qualitative. When determining which methodology was more suited for the present thesis both methodologies were considered. The main deflecting argument for choosing a qualitative methodology was that a quantitative study is normally chosen with the aim of validating with statistical means a hypothesis that was stated by the researchers. Nonetheless, a quantitative study has the difficulty of identifying and structuring the dependent variables so as to them to explain the independent variable, to justify the benefits of this methodology and moreover to validate the central purpose of this investigation. For the scope of this project and based on the previously mention it was considered more appropriate to implement a qualitative study.

A qualitative study is more adequate for an exploratory research that aims to identify or develop proposals for the implementation of a Lean startup methodology from an extensive literary review. The exploratory type of research is carried out in order to know the topic that will be addressed, which allows us to familiarize ourselves with something that until this point (now) we did not know about. Additionally, the current document includes the study and breakdown of different cases of successful application of the lean startup approach in different economic sectors from an international perspective.

The results of these type of research methodology provide a panorama, scope or knowledge of the main subject of the investigation, that can be used as platform or first base for any type of subsequent research that may be carried out, or in this particular case can be used as the base for the development of a project of this or other nature. In other words the results of this type of research can be the initial information for a more rigorous investigation (a hypothesis is left raised and

formulated and can be retaken for further investigations, or not), or the layout for a more tangible project.

In Latin America there is a scarceness of academic works that deepen in the application of the Lean Startup Methodology in Latin-American companies, nevertheless it has not been ignored as a method actually used by new businesses. For instance Rappi, a recent case and one of the most successful and known in several countries. The absence of academic contributions in this new innovation methodology impulse a research that lead to interesting cases of this ilk in European and North American cases. The cases permit a better comprehension of how to create a business and the necessity of higher and stricter rivalry and productivity in more competed markets when compared to Latin America.

The data obtained from the IDB, academic magazines or publications are a trust worthy source and also pertinent to be able to analyse and propose how to impulse a major usage of the methodology in Latin America.

Through a qualitative focus and reviewing the extensive bibliography about the Lean Startup methodology, the interrogation for this project is:

5.1. Investigation question

Nowadays, how can entrepreneurs and firm leaders use continuous innovation (Lean Startup method) to improve the profitability of their business and the experience of their clients in Latin America?

6. Analysis of Lean Startup methodology – Pros and Cons

Innovation is nowadays in the highest point of the corporative management agenda. Already in 1942, Schumpeter described how a process of creativity destruction ended with products or complete firms that were not able to compete. Today, small entrepreneurial businesses are the ones that challenge and overcome big incubators through innovation; consequently it becomes almost natural to look at them as inspiration. Curiously, the last decade has evidenced theoretical developments about how new firms can follow certain patterns or guidelines to avoid unexpected failures and/or costs.

It is not easy for companies to alter their innovation focus. Edward Kahn in his book *innovate or perish* (2007) stated that barriers for innovation in companies raise from management, processes, and the culture within the same. The author wrote that the lack of support from team leaders, bureaucracy and excessive rationalization hinder innovation in a typical firm. Moreover, Kahn assures that in firms another important obstacle for innovation is the fear to failure, the intolerance to out of the box thinkers and the lack or absence of appropriate rewards or acknowledgements for new and different proposals.

In recent literature, the concept of costumer development and the methods of the Lean Startup methodology have been an important influence to businessmen worldwide. In the case of this thesis that is being developed, the starting point is the Lean Startup methodology developed by Ries (2011), the author arguments that startups can learn a set of lessons to avoid wastes for investors and their own time and money. The main message of this methodology is validating knowledge from clients, working in an iterative way and being prepared and open to change the direction or scope of the business whenever it is necessary.

The main differences in the way of innovating between traditional businesses and lean startups are better summarized in table 3 where there are also divided by the organizational area. This table also represent a big compilation of what the main author of this investigation (Ries) stated in 20110.

Table 3: comparison of traditional firms vs. lean Startups in innovation.

ORGANIZATIONAL AREA	TRADITIONAL BUSINESS	LEAN STARTUP
Goal/ Business Plan	Execution	Discovery
Model	Business model Canvas	Lean Canvas
Testing Focus	Internal	External
Product	Full product launch	Test (MVP)
Metrics	Corporative activities	Innovation (OMTM)
Strategy	Red Ocean	Blue Ocean
Process	Schedule /quality	Learning

Source: UC Berkeley (2014)

As the lean startup methodology gains strength with the pass of time and demonstrates favourable results, more traditional or incumbent companies have become more interested in applying this methodology. The recent developments of the corporative theory (2008) has been recently updated and developed and is attracting a big amount of followers for new business and to those incumbents who decide to adopt it.

For instance, Starbucks was able to create a new experience for their clients which gave them the capacity of being able to sell their product at a higher price that its rivals even though its quality is not necessarily the best.

Dell became the most successful producer of personal computers of the world not because of their investments in investigation and development, but as a consequence of being able to produce laptops easy to use, to include their products in the market in a faster and more agile way and because they

innovated in processes such as the management of the supply chain, production process and direct sell.

Ries (2011), who has the brand of “Lean startup” registered; realized that many of the products that are created after a great effort, fail because they do not have a good reception in the market. In his experience as an entrepreneur discovers that there are numerous methodologies in different sectors of the industry that applied to a startup in an innovative way can support the development of success. From such methodologies some to highlight are lean manufacturing, agile development and customer development (Ries, 2009).

- Lean Manufacturing: in the production system of Toyota named lean manufacturing; Ries found the fundamental bases that applied to innovation conclude in the lean startup methodology. Lean manufacturing or adjusted production (as it was initially named) is a model that tries to extract the maximum value from clients, using the minimum amount of resources (Womack, Jones and Roos, 1993).
- Agile Development: Ries, with his background in software development, incorporates the methodologies of agile development in his Lean startup methodology. The agile adaptive methods, in contrast with the traditional cascade methods, have a general perspective of the product or services without specifying the final result since many hypotheses are created, and these will generate a product prototype. The prototype will then be used to explore the market and validate the hypothesis or modify them in a continuous test of trial and error that adapts the product.

With the agile methods, projects are developed in time units called iterations. Each iteration includes a cycle of development for the product; it is delivered in a period of time and each delivery will be adding functionalities in such way that deliveries are transformed in demos. At the

same time each demo permits the evaluation of the functionality of the product in collaboration with the client, and it also allows the incorporation of changes continuously without waiting to the last delivery of the product (Alvarez, De las Heras and Lasa, 2012). This model aims to optimization and agility through the interaction of the actors, the collaboration and the change flexibility (Fowler, 2005).

- Customer Development: Blank criticise the traditional way of creating companies centred in the development of the product, in which the idea of product or service is conceptualized: develop→test→launch to market (Blank and Dorf, 2013). The problem is that most of the startups fail because they do not have any client. The process of client development starts when the establishment of the hypothesis since many suppositions must be validated with the direct contact with the presumed users.

The first step is to know if the client really has a necessity and is willing to pay for it; the second step is to validate if the assumed client is really willing to demand the product through a MVP; and finally the businessman proceeds to do the transition from a startup (based in learning) to the creation of a company focused in the execution of the business (validated as viable).

In summary, it can be stated that the three main pillars of the Lean Startup Methodology are: i) create value for the clients, understand as the elimination of waste, offering what the client really demands with a corresponding quality; ii) developing the product from the clients point of view, learning and validating for direct and continuous contact with him; and iii) developing the product in an agile, flexible, iterative way incorporating new functionalities in the development process.

The constraint of large companies to innovate does not rely in the lack of innovative ideas or employees. In technological-entrepreneurs, the entrepreneur

should “get out of the building” to involve the based companies, however, they limit themselves to work only on the ideas within their scope. This condition is referred to as “technological inertia” because they have invested many resources in the existing technology and market. Moreover, the size and complexity of modern business have made the company to be bureaucratic, which has potential to lower company agility to innovate. The failure to generate radical innovation is also caused by “the incumbent’s curse”. This happens when the incumbents focus too much on their current position in the market and satisfying current customers rather than seeking for new pathways to which the new products might lead (Edison et al., 2015).

Finally to summarize this new methodology conceived by Eric Ries (2011) and described later by Edinson et al (2015) as:

- Entrepreneurs are everywhere: The startup initiative was driven by top management. The top management provided a theme for new product development and created a team to implement it. The team explored the feasible concrete idea. Like in other innovation initiatives, practising Lean startup inside a large company needs full support from top management. Moreover, working in a startup manner is not for everybody in the company. Some people work better with stability, some work better under uncertainty.
- Entrepreneurship is management: Although the company has R&D, the top management decided to choose internal startup for new product development. The top manager argued that the internal startup has to do some research about the new product and also is responsible for its commercialisation. One reason for pivoting was that there were not enough end users. One of the lessons learnt was there was no need that would be solved by that product.

- Validated learning: The internal startup involved the customers in development phase, which reduced the experimentation time to validate the ideas. The team managed to pivot from a specific to common market segment.
- Innovation accounting: The customers for the internal startup are the end users and top management. Therefore, the team must aim to not only increase the end users' perception but also secure the sustainability of the project fund from the management. Measuring is useful, but it is costly. For developers, main training several versions of the same app is complicated. To track the progress of the startup, the top management always relied on two measures: net promoter score (NPS) and the number of users. The top manager said that these two measures are enough to decide whether to stop the process or to continue. It is interesting because the reason why they used the measures is because the competitors are also using them even though they develop different types of software.
- Build-Measure-Learn: Working in build-measure-learn loop allowed the team to build the right product. The startup mode increases the speed of development. One of the innovation managers said that the term viable in MVP is misleading and suggested that the product should be desirable. However, to increase the speed of learning, breaking the rules is inevitable. Following standard architecture and programming practices that potentially slow down the speed of development should be avoided.

6.1. Considerations about the implementation of the Lean startup methodology

Studies developed by Harvard University, found that there are certain limitations for the application of the lean startup methodology after evaluating more than

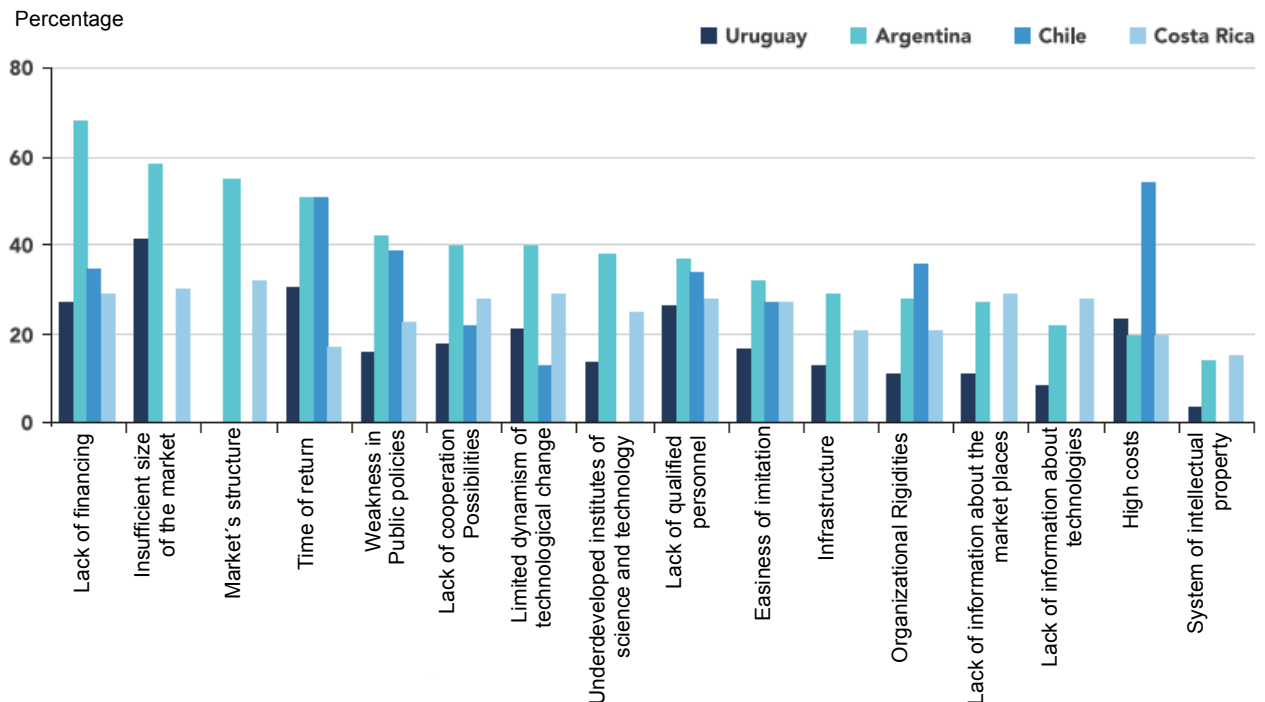
250 firms in the United States. These studies concluded that there was no linear relation between the number of validated hypothesis and the further success of the team. In summary, it is not said that more validation is better, but that the process must be adapted to each situation. Furthermore, it was common in most of the firms that failed or had the worst performance that they realized open conversations and more formal experiments with clients; while teams that did either open conversations or formal experiments only at the beginning of the first stages of designs of the business were more competitive and had better final results (Harvard University, 2016).

Between other factors that limit innovation according to Harvard University (2016) some are:

- The high price paid to obtain the first client and the cost even higher of erring the product.
- Long cycles of technological development.
- Limited number of risk oriented people that will get involved in the founding process or even working in a new or in building process company.
- The structure of the venture capital industry; in which a small number of firms needed to invest massive amounts of money in several new created companies to obtain a relevant opportunity to obtain significant utilities.
- The concentration of experienced people in ambits of how to build new business. In the United States most of these people are concentrated in the east and west costs. (This is less of a problem and Europe and other parts of the world, but even in the rest of the world there are critical geographical business points).

In Latin America, a study developed by the Inter-American Development Bank (IDB) in 2010 the following indicators presented in figure 15 where found:

Figure 17: limitations to innovation



Source: IDB (2010)

As evidenced in the previous figure the studies performed by the IDB in 2010 evidence that the main obstacles for innovation for firms in Latin American companies are: i) limitations to financing that allow entrepreneurs to carry on (added to high costs and risks of innovating); ii) inability of the companies to adapts in long terms (assumed or real) that must happen before the firm can recuperate itself or before it can at least obtain returns (profitability rates); iii) the reduced size of the market (reduced demand) and iv) the lack of qualified personnel suitable for the required tasks.

7. Lean Startup in different economic sectors: Industry, Technology and financial services

The goal of any country, whether developed or in a development phase, should be to increase dynamic or high-value ventures since they are the ones that contribute the most to generating innovation, employment and wealth. To achieve this objective, enterprises can be transformed a) by necessity into higher growth companies, by achieving adequate levels of differentiation and organization, or b) by motivating entrepreneurs with greater potential to start businesses with higher added value, innovation and growth potential.

In both cases, a strategy focused on fostering dynamic entrepreneurship from universities, including the Lean Startup methodology as a fundamental basis in courses on entrepreneurship and business creation, can have a significant impact on the quality and quantity of business ventures.

Innovation and the lean startup methodology are kind of new topic that in the recent years have gained significant importance among not only university lectures but also companies. In fact several elite companies such as Google, Apple, Toyota or JetBlue (notice that all in different industries) have implemented the methodology and re-directed their businesses in order to adapt to the current market scenario; a scenario that pushes them to break rules, to rise value for customers, and to pivot and iterate continuously.

The Lean Startup is a methodology that contributes significantly to promote the creation of dynamic ventures. This is because the process of creating-measuring-learning increases the probability that the entrepreneur incorporates variables not considered by him but considered by potential clients, and that will undoubtedly make the product he develops have high levels of differentiation and innovation, consequently his product will also have characteristics of important scalability and growth.

Since the Lean Startup is a fairly new methodology, there are still no conclusive figures (mainly in Latin America) showing how the implementation of the method has contributed to improving (especially dynamic) ventures or has managed to increase economic indicators such as greater number of companies created with dynamic characteristics. This could become an important and necessary research topic to address in the future.

In this chapter several cases of success of the Lean Startup methodology in big corporations will be presented, these will be useful since they are a references that involved better practices and learn in the process; these cases presentation intends to be the base for readers, entrepreneurs, and other interested figures to involve the further exposed in companies in the Latin-American market.

The information regarding exit cases of big firms was obtained from several digital publications about Lean Startup².

7.1. Information Technology Industry

Although we are already very used to work with new technologies, and digitalization is nowadays extremely common in our lives and our employment, we might have not yet seen its full potential. Technology is not going to stay stagnant; in fact experts say that as the years go by, new, totally revolutionary and disruptive technologies will continue to emerge. We can say that there are still "emerging" technologies; reason why many specialists believe that within a few years the technological trends of the future will be incredible. Technological innovations are guiding the evolution of society, as well as of the organizations

² Government Technology - <http://www.govtech.com/pcio/Governments-Take-a-Lean-Startup-Approach.html>

Decidedly - <https://decidedly.com/3-examples-of-lean-startup/>

Lean Startup Case studies - <http://theleanstartup.com/casestudies>

Fortune - <http://fortune.com/2018/02/22/startup-way-procter-gamble-general-electric/>

themselves. So far, progress was made in virtual reality, artificial intelligence, cyber security, UX design, etc.

Even if to the date there are still around 4,000 million people (more than half of the planet) without access to the Internet, the speed with which new digital platforms advance generates great challenges. And it is said that technological changes are the main element of the next Industrial Revolution. If the First Revolution, associated with the steam engine and the development of the railway, took 120 years to reach the whole world; Now the implantation of new technologies happens every time at a higher speed and each change produces more acceleration (Siemens, 2017).

One excellent example of technological innovation and its revolutionary impact is the case of apple. In 2007, Apple launched today's almost ubiquitous iPhone, the first smartphone. In just 10 years, there are 5 billion smartphones, which have become a powerful productivity tool and, in many cases, essential for the work itself. In fact, ten years ago, the largest companies in the world by market capitalization had little to do with the current ones. If before the largest companies were related to the hydrocarbons or energy sector, now the power lies in the technology. According to a Bloomberg article, ExxonMobil has left the podium to Apple, Google or Microsoft (Siemens, 2017).

7.1.1. Dropbox

Drop box is one of the most known examples of a startup that implemented the methodology and its growth has been huge; in fact the service of digital archive transfer nowadays has more than 500 million users around the world. Dropbox started with a MVP presented in a video of three minutes, the video showed the possible consumers what the platform could do; how ever up to that phase not a single line of programming code had been written.

The response to the video allowed Dropbox to prove if the product had demand and at the same time its presentation was the first step to capture audience through a waiting list. Moreover, the video was also crucial since it was possible future clients gave feedback and the comments collected were high quality information that the team used further to configure and edify what the product should offer in symmetry with the clients necessities.

7.2. Financial Industry

With the use of technology in the financial sector new channels are created, these channels benefit the interaction with the client and his/her experience, providing greater agility in the processes. Standing from a digitalization point of view, and considering the pace at which the modern society is moving, fewer people want to approach a physical branch. For this reason, the sector points to the use of new technologies in order to provide complete customer service. Israel, global power in innovation and the second incubator of startups in the world, recognizes that one of the main problems that the sector has is the authentication process, some of its practices generate friction with customers and finally sales fall.

On the other hand, the Internet of Things is about to have a great impact on the services sector, reducing costs, maximizing data analysis and extending the useful life of products. In fact, by 2020, 25% of the companies with intensive assets are expected to adopt both technologies to optimize their financial services. There is still a long way to go in terms of innovation in the technology sector among the new initiatives such as artificial intelligence in financial applications.

7.2.1. Wealthfront

This company (former startup) offers an automated investing service powered by software algorithms; the platform allows users in a wide segmentation of the

market to access investing funds; it offers a solution for investors who are not able to access to the main hedge funds and money managers. It examines managers and with a fair scale it works as platform for them to become accessible for regular investors.

Wealthfront implements continuous deployments of information and money. Considering that this industry is characterized by having high risks, high costs and additionally it is part of an environment that is regulated by the SEC (Securities and Exchange Commission), it provides users a more comfortable and secure way to invest. Nowadays the company (founded in 2009) manages assets worth more than \$200M and processes around \$2M dollars daily.

7.2.2. Intuit

Intuit is a platform that finance and accounting services mostly for small businesses, accountants and individuals. The company offers several products according to the clients' necessity.

One of the company's co-founder stated that it were the established companies the firms that needed the most of the adoption of a lean methodology that involved innovation; therefore, in its working processes the company implements incentives for innovation, horizontal planning, non-structured working time for employees, start events, between other activities that power the innovation that is then canalized through lean methodologies.

Since the company's launch in 2008, all the previous initiatives implemented for workers have been an important part of the designing of new products such as SnapTax, Gopayment and ViewMyPaycheck.

One of the cases where the MVP implementation was clear was SnapTax. Carol Howe (manager of software products in Intuit) stated SnapTax was launched in 2009 as a tool for the management of documents online and its development was based in the comments and feedback of clients. The company experimented

with changing the reach and scope and segment of the product in order to be able to complete and gain all the information regarding taxes for the basic tax declarations of clients in California. Its product was also suitable for people without home, children and/or investments.

Customers response was superb; during the first three weeks the product was downloaded more that 3500,000 times, and consequently it was the beginning of a whole new line of products for Intuit.

To conclude, Intuit is a business that firmly believes that lean innovation is compulsory to achieve its vision evidence is the statement gaved by Scott Cook (representant of the company in 2012); he said that the company intends to change lives of its customers so deeply that they cannot even imagine going back to their old methods. And that statement is deeply correlated to one of the values of the company that says, “ We are laser focused on our customers. We line and breathe innovation. We champion those who dare to dream”³.

7.3. Industry and commerce sector

Industrial innovation can be divided of classified into four categories that are described and in a wide spectrum parameterized bellow. The first two can be considered technical innovations, while the last two can be considered management innovations (Sancho, 2007, page 556):

- Product innovation: A product innovation is achieved when the product is entirely new (radical innovation) and is introduced in the market; or when there an incremental innovation is achieved. An incremental innovation is the substantial improvement of an existing product; this improvement might involve the enhancement of technical specifications, components or materials, embedded software, etc. The achievement of an incremental

³ Retrieved from: Intuit (2019) <https://www.intuit.com/company/>

innovation normally is followed by the work of engineers, technicians and/or market researchers; in the other hand radical innovation are more commonly based on science.

- Innovation of production methods or processes: Innovating in the processes or method of production implies the introduction doing the same but through a new process that improves the exiting one. It includes significant changes in the techniques, in the equipment used in the software, etc.
- Innovation in management: Innovating in the managerial aspect means that a change or improvement in the organization of the company is implemented. This category of innovation involves the inclusion of new methods in the practice of work or in external relations; it is particularly important that firms consider it and do not belittle the impact of this kind of innovation since it might be the base for further innovation in other of the categories here presented. This innovation can trigger the creativity of the workers and lead to new ideas, processes and products or ways of marketing that will support the company in its flexibility to adapt to internal and external changes of the environment.
- Innovation in marketing: innovating in marketing comprise the creation of new marketing structures in the company, for instance changes in the aesthetics of the product (design of the product, its packaging or presentation in general), in its promotion, in the places it is sold, or in its price.

From the four categories above presented it can be deduced that innovation in not always an invention; however it always implies novelty. A novelty can be introduced in the whole world (in this case it is also called "Maximum

innovation”), in a country, or even only in a determined company (in this case in also called a “Minimum innovation”).

When an innovation is introduced and it generate successful results, the competitors know about it, and it is very common that competitor/s become imitators; imitators are the companies that put into practice the developments initiated by others, in other words the copy.

Commonly SMEs are imitators that copy one or more of the previously mentioned innovations, thus they involve maybe an incremental innovation of an already existing product, process and its adaptation to the markets (Snacho, 2007, page 557).

The evolution of the needs of consumers, the development of new technologies, and the liberalization of international trade, among other changes have led in the last decades to profound changes in the structure, strategy, activities and functioning of industries. On the other hand globalization has also played an important roll in the changes of actual industries since it has increased the access to information and opened new markets; the combination of all this factors have lead to greater international competitiveness (Sancho, 2007, page 557).

The pressure to reduce prices increases continuously while the demands on quality standards increases. Under these conditions, the only system that can be used to face competition is the development of innovative products and processes. Currently, the most competitive companies are those with the greatest capacity of innovation (Sancho, 2007, 557).

Finally other great challenges that companies might face in a higher degree in the coming years is the need of reducing costs, improve flexibility, improve productivity, improve quality and improve the speed (speed in terms of production or launch for instance) of the product; all the previous pressures to competition are results that the introduction of industry 4.0 entail.

7.3.1. Toyota

The carmaker was one of the biggest inspirations for Ries due to its unique adoption and implementation of lean manufacturing techniques. Toyota included fabrication of small lots, fast iteration and the search of information that could come from workers. Nowadays, the company recognizes that it is behind its rivals in connected automobiles; therefore it is implementing lean techniques to find new approaches in order to update itself.

In a conference developed at the beginning of 2013, two delegates (Matt Kresse and Vinuth Rai) from Toyota Infotechnology Center³⁴ shared their experience in the application of lean principles to attract clients and request from them comments in regards of an earlier incorporation in the development of products.

The two designees shared their considerations about Toyota's system; they said that even if the production system implemented by the company (based in Toyota's Product Development System principles) was efficient, other aspects regarding the clients' perception of the car such as the navigation and multimedia system could only receive comments and feedback after the vehicle was launched.

To enhance the prior obstacle, Toyota used an android tablet connected to the car as a MVP, this facilitate an interface in which the client could have direct interaction with the system. Toyota placed announcements in Craigslist requesting trial clients; more than 300 people replied, after that they performed live trials with the prototype system to ease feedback. These trials were considered successful for the team, not only they received feedback but 60% of the clients were retained and 40% of them did referral to others.

7.3.2. General Electric (GE)

In the heart of FastWorks there is Ries philosophy of testing prototypes with consumer and in a further stage iterate them as a consequence.

A positive outcome for GE was possible thanks to the business of gas turbines. GE changed its approach of selling updates with the pass of time to an approach where the company engaged with the future changes in advance, this new approach was a lot friendlier with the clients.

The prototype base of all the change passed through around 18 iterations, each of which was informed and received feedback from clients. To the day, more than 40,000 employees in General Electric have received training in the lean startup methodology as part of FastWorks, system that constantly inform the teams about the development of everything from light bulbs to gas turbines; and the system is said to be paying excellent tributes.

According to Bloomberg, one of the gas turbines developed as part of the FastWorks program was developed with more that two years of anticipation and with 40% lower costs than if the company would have used the traditional approach that GE used before for product development. The company points out that they received around \$2 billion dollars in additional sells in 2016 as result. In fact Janice Samper (GE Executive development Leader) said that through FastWorks, GE was “creating a culture where we operate faster while delivering better outcomes. At the heart of it is the discipline of testing and learning that permeates the entire the organization,”

And in 2013 GE final year report stated: “In the first year, Ries trained 80 coaches exclusively dedicated to FastWorks. Together they exposed almost 1,000 GE executives to Lean Startup principles. GE also launched 100 FastWorks projects in US, Europe, China, Russia and Latin America. They range from building disruptive healthcare solutions to designing new gas turbines. GE plans to expand the program to 5,000 executives and launch hundreds of new projects next year. “GE is an ideal laboratory for applying lean practices because

of its scale,” Ries says. “This is undoubtedly the largest deployment of Lean Startup ideas in the world.”⁴

7.3.3. Procter & Gamble (P&G)

When launching some of its most disruptive new products, P&G uses a “lean startup” approach to innovation. This approach brings together small cross-functional teams to develop and launch a series of “minimally viable products”. These early launches allow the teams to test and adapt their propositions with the speed and agility of a startup. A lean approach drives value in different ways: it brings together the best of P&G’s capabilities from all of its business units; it increases innovation productivity by testing market potential early; and it encourages innovation in business models as much as in products and services.

By adapting the concept of “more viable product” of Ries, Procter & Gamble got two new lines of feminine hygiene products for the test phase of the consumer market in just one year; an extremely short time considering that this type of processes usually take up to three years under other circumstances or following other procedures and/or methodologies.

7.3.4. Zappos

Another excellent example of a lean startup is Zappos. Zappos is an online retailer; the company focus on selling a wide variety of shoes and bags. Ever since 1999 (date in which the firm started operations), its founder, Nick Swinmurn, was not sure if the market was ready to purchase shoes online. In that moment with the capital he had and his experience Swinmurn could have opt for buying stocks, developing inventory systems, built a network of distribution

⁴ GE’s annual report (2013). Retrived from:
<https://www.ge.com/reports/post/82723688100/the-biggest-startup-eric-ries-and-ge-team-up-to/>

channels, and evaluate if traditional operations would have worked; however, the entrepreneur decided to prove his hypothesis that consumer will buy shoes in online platforms. To prove his hypothesis, he used a minimum viable product.

Swinmurn's MVP worked with pictures that he took from local shoe stores; he approached the stores and took pictures of the inventory; these pictures were published in a basic web platform. If the SKU received an order he will return to the store, buy the article in full price and send it directly to the customer that placed the order. Soon, Swinmurn proved that there was a demand for his hypothesis and consequently Zappos could finally become a million-dollar business based in an online shoe retailer model.

8. Description of the corporative environment in Latin America specifically in regards of the implementation of innovation.

There are two dimensions to the concern over the situation of Latin America. The first related to the incapability of entrepreneurs in transforming ideas into successful businesses and the second in concern to the weak and inappropriate allocation of expenditures within companies that would foment or encourage personnel to be innovative and grow together (both individual professionals and the firm itself).

The first dimension of the problem, where a low quantity of startups that are being developed can be related to the background of the entrepreneurs or the market where they compete. For instance:

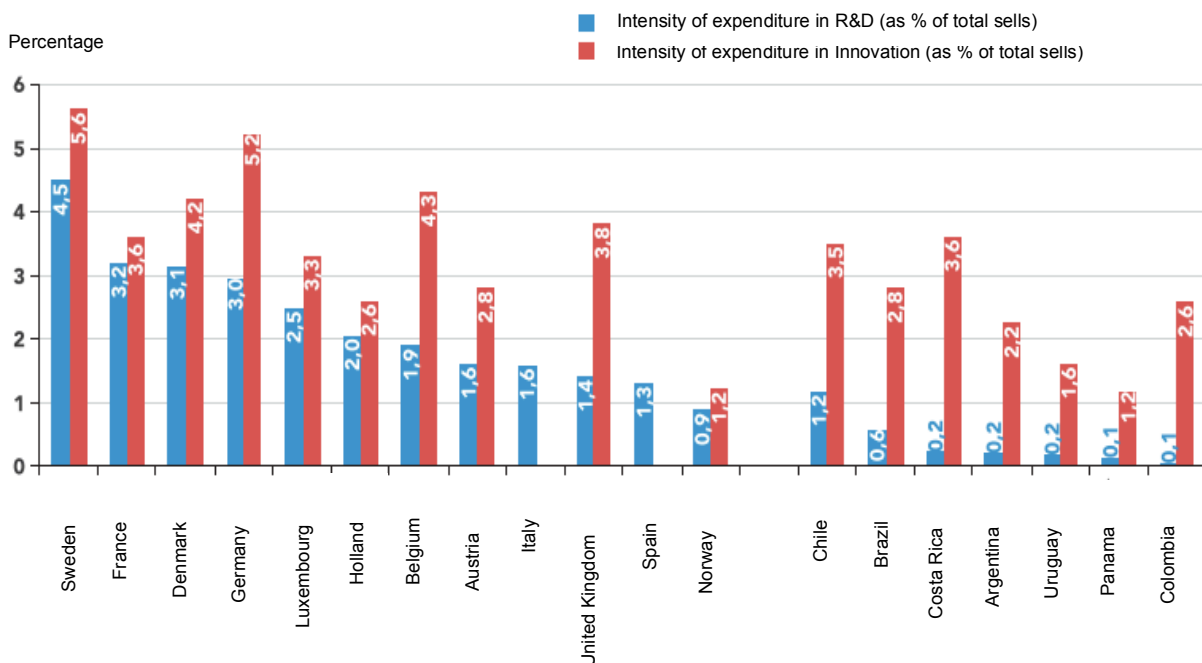
- There are few necessity entrepreneurs (only 3% of the total) this means that most of the people that decide to build a startup have works behind therefore there is not a real need to put a 100% effort on making it succeed. (M. Grazzi et al, IDB, 2016, pg. 24).
- Only 16% of the startups perform or even considered exporting their goods. This evidence that the entrepreneur does not vision to other markets to make the business grow. (M. Grazzi et al, IDB, 2016, pg. 24).
- The government does not provide a lot financial support for startups.

The second dimension concerns on the deficit of innovation within companies. For this, it is important to highlight that innovation and productivity are tightly related at a business level; in fact, it can be said that they have a direct and proportional relation; consequently, the usage that the company gives to knowledge is one of the main factors that will determine if the innovation system is adequately working. Moreover, the investment that the firm gives to R&D (Research and Development) can also be one of the impetuses for the business

success in technological transfers and in the growth of the company's capability of absorbing external knowledge.

Investing in R&D companies can gain advantages in at least two things: 1) generate new and innovative ideas, and 2) have direct effects in the development of absorbing capabilities of employees and consequently in the business in general (IDB, 2010). Below find a summary concerning the diagnosis of innovation in Latin American in relation to other European countries.

Figure 18: Companies' investment in innovation



Source: IDB (2010)

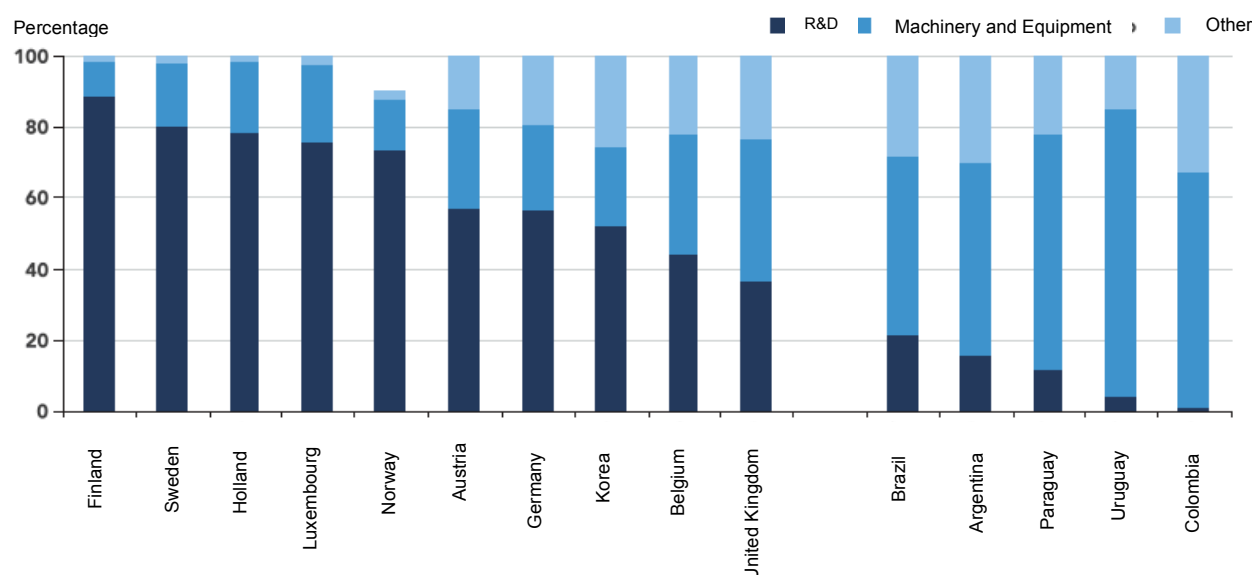
In Latin America and the Caribbean (LAC) the innovation done by companies is a reflect of the weaknesses that can be observed in a wider or national panorama at a science and technology level. Companies in the region develop different innovation activities if compared to activities developed by companies in more industrialized countries. Most of the LAC companies are in fact very distant from even trying to innovate in the technological frontier; their innovation strategies are

essentially oriented to the acquisition of incorporated technology. Acquiring technology developed in foreign regions and incorporating them to their production system is in fact one of the main worries of companies in the LAC region.

In Latin America, the expenditure in innovation is condensed in the acquisition of high-tech machinery; however, the overall panorama of the region seems to indicate that the capacity of R&D in the firms' structure is not enough to allow the company the possibility of transforming external knowledge in autonomous capabilities of innovation. To verify the previous statement in figure 18, find the percentage allocation of companies' expenditures; it is evident that the distribution of this is extremely diverse in LAC compared to other more developed countries where R&D is a more significant investment. While the general investment are majorly assigned to machinery and equipment as evidenced in figure 19, and the same scenario similarly replicates in most of the countries of LAC.

Also as prove of the previous statement is the panorama that in many LAC countries there is an increasing number of forums and congresses that work on different startups; therefore there are innovations that are being born from this region. However, since the investment in R&D and in the enhancement of procedures is extremely disproportional, plus the situation of expenditures priorities; it is evident that most of these innovation die in early phases without getting to a mature stage in the market. (IDaccion business news, 2018)

Figure 19: Distribution of Companies' expenditures in different countries.



Source: IDB (2010)

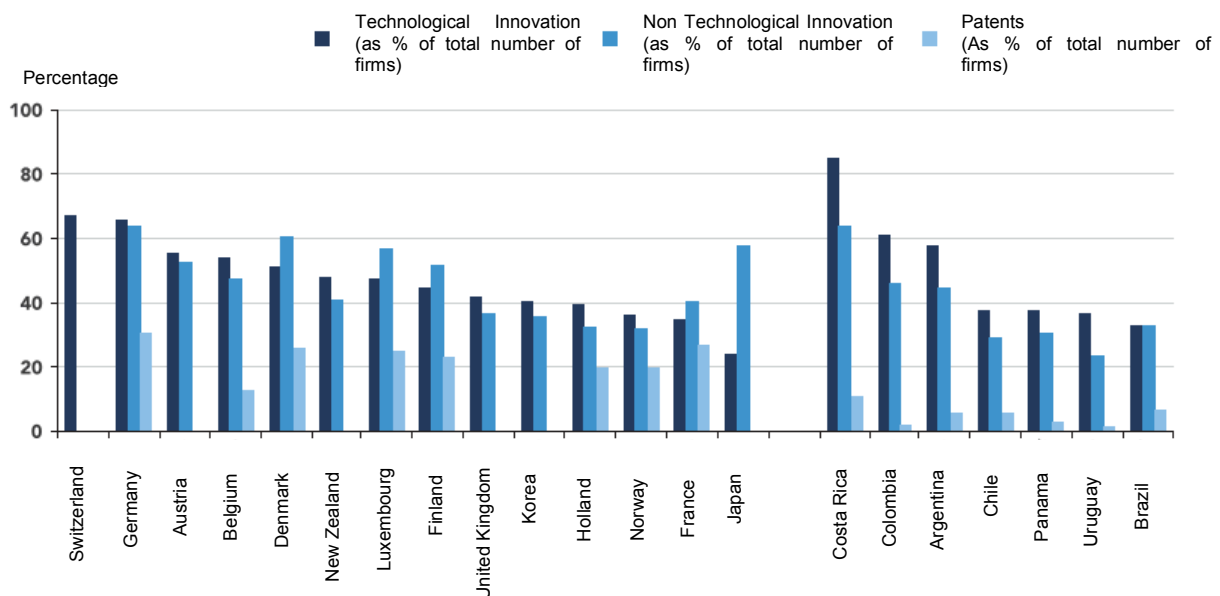
The technological delay in the companies from the LAC region has a direct impact innovation (Navarro et al., 2010). Technological innovation normally focuses on innovations related to adaptation and/or gradual enhancements; as a consequence, the degree of novelty in innovations regarding products is very low. One additional consequence of the low degree of novelty is that the enhancements or results are limited to the company's scope (new for the company) but do not reach a bigger scope where they are new to the market.

Under the previous circumstance firms become followers in technological aspects and never pioneers, since their main innovation strategy is one of adopting technologies already developed in other places (IDB, 2010).

In the LAC countries, with exception of Costa Rica, innovation of the processes is a lot more frequent than innovation in the product. Apparently, the previous situation is related to the normal behavior of companies in the region of acquiring knowledge related to capital assets since the incorporated technology must have

a direct impact over the enhancement of productive processes. In the other hand I many countries members of the OECD (Organizations for Economic Co-operation and Development), such as Japan, Germany, United Kingdom, Switzerland, Norway and Finland; innovating in products is a lot more frequent than innovating in processes. The previously explained panorama reflects why in the second groups of countries there is a higher degree of technological sophistication (IDB, 2010).

Figure 20: Distribution of types of innovation inside companies per country.

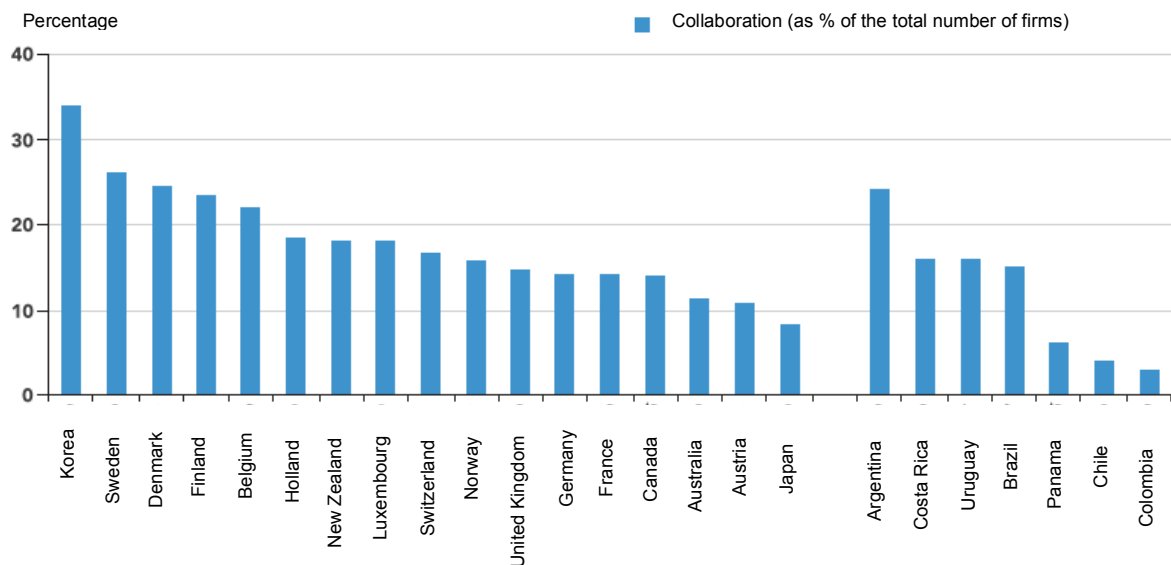


Source: IDB (2010)

Continuing with the LAC panorama it is to highlight the importance of collaboration to achieve innovation grows; with the increase of complexity of technologies and the new products and/or services there is also a growth in the requirement of a wider variety of technological capabilities. Another reason why firms turn in favor of collaboration is in consequence of the high costs related to innovation tasks.

Regarding collaboration in LAC there is not a lot of information, it is a subject that has not yet been well examined; hence they expose significant differences in relation to the concept of innovation, even more in what concerns to collaboration. For example some studies only survey topics that concern to collaborations in R&D, while others only examine the different forms of collaborations that are made in the region. In figure 20 it is evident that some LAC countries (i.e. Panama, Chile or Colombia) are still extremely behind in collaboration between companies while other countries like Korea, Sweden, Denmark, Finland or Belgium recognize the importance of cooperation and implement it more.

Figure 21: Collaboration in companies from different countries to manage innovation.



Source: IDB (2010)

To conclude, companies in Latin America usually base most of their innovation decisions in information that was collected with data from the market in general (suppliers, clients and competitors). This data is normally was collected by scientific institutions that might not do a relevant distinction between the market's

differences (for instance the difference between LAC from European or north American markets); therefore, this situation entails that both companies and scientific institutions do not give a big importance to the source of information.

9. Proposal for the Implementation of the Lean Startup methodology in Latin American businesses.

Once analysed the Lean Startup methodology and the overall panorama of the Latin American industry, there are some recommendations for the implementation of the methodology in the region; these are:

- Work in the emotional relationship not only of yourself as an entrepreneur but on your workers. This relation with the business determines the type of firm that it is, the way it operates and how it would be managed. (IDB, 2016).
- Previous experience of the founder of the firm is a positive asset; although it is not required it does provide a base for the managerial level to rely on situations where experience might help to identify opportunities, improve weaknesses, exploit competitive advantages or solve problems (IDB, 2016).
- Although entrepreneurial financing is still weak within Latin America, it is important to have and secure a strong of big financial capital. This capital is extremely useful not only for covering and correcting mistakes (normal in initial phases), but also to accelerate the growth of any business (IDB, 2016).
- Once established the startup or business think big consider exporting your product as soon as possible, believe in your product.
- Train your workers to have flexibility towards working in new ideas that might be other than the normal tasks he/she develops normally.

- Allow workers to present proposals and new ideas that would favour the tasks he develops, the processes or the business in general.
- Create spaces for your workers to present their proposals in the firm and assure that their proposals and the given information flow rapidly to a committee or to the people/ person in charged of reviewing it.
- Evaluate and filter the proposals /ideas in a methodical and systematic way and use the correct /appropriate business process to do so.
- Assure the support and protection (isolation if necessary) at a corporate level of the selected ideas.
- Provide a mechanism to measure the success of the innovation using counting tools outside the regular objectives of the firm.
- Define the stages of preparation for the investment using clear guidelines.
- Provide the adequate resources for each stage of the project in order to fulfil the goals.
- Design a reward structure that foster innovators to present projects, that betters their professional carrier and that encourage them to share their success.

Moreover, this project will present reference of the work developed in the University of applied sciences in Finland in 2014. To create a practical way of introducing a Lean Startup methodology in a business, they created a model that presents a new scope for the organization and at the same time facilitates innovation. The model suggested is a sand box for innovation, a sandbox where

the organization has a new canvas to begin its learning on the application of the Lean Startup methodology.

The program suggested points to teach organizations how to innovate and develop new services and concepts in an agile, fast, efficient and reasonable way. It also presents a new mentality that is a core tool to become more innovative and more client oriented (as suggested by the Lean Startup methodology). In the whole program the client never stops being the center or the main actor and determinant of the process.

9.1. Lean Startup methodology in Latin American organizations.

Additionally to learning a new scope, the program of lean startup innovation can be used to create new services and business concepts or to renew the existing services. The objective is to promote employees to be more innovative and give space for them to make, contribute or see their ideas grow into products or services.

The program also stimulates the firm's members to work with an intrapreneur spirit (defined by Gifford Pinchot as the spirit of "workers within an organization that follow their entrepreneurial spirit generating and exploiting ideas initiative and business innovation") in order to offer opportunities not only for the organization, but also for the workers. Under an ideal situation the program is useful for learning and creating new business ideas.

The proposal for Latin American organizations is to use this program since it presents the main principles of the lean startup methodology in conjunction of the process and methods of designing a service. Workers will learn these things through workshops, tasks, assignments and personal studies. It is important that the organization along with the learning program for workers profits from it and learn as a conglomerate or community; this will be possible if the organization

involves work with the program to become an active part of it as it is being developed.

9.2. How to design a Lean startup project within an organization?

Hereunder, find 5 essential steps to carry on this methodology (proposed program of the university of applied sciences in Finland in the company).

1. The first step's main objective is to understand the interests, necessities and preparation of the client (seen as the company that should implement the suggested program) for the lean startup innovation program. The goal is to obtain a deep vision of the client with several questions. For this, during the first meeting with the client the aim is to prepare him and agree with him to a second meeting.
2. The second step is the planning with the organization. In the second meeting the goal is to analyse the client's requirements for the lean startup innovation program. The requirements include the clients' focus, the group to which the program should aim, the boundaries, the resources available for it, the schedule and milestones and the budget. These said; the aim is to comprehend and define the goal and objectives of the client for the program.
3. The third step is to develop and present a proposal of the program that is coherent and in line with the requirements and expectations of the client. The proposal includes a structure for the program, the topics to cover and the results that will be created along the program. The proposal should also include the price and the conditions. At the end the main goal of this step is to achieve an agreement for the proposal and to set land for the next steps.

4. The real project starts at the fourth step with the information collected from the client. This includes ethnographic studies (such as interviews and observations and a possible workshop with the interested people). The objective is to get to know what type of tools, installations and resources the client already has and how could they be used in the program. Once the evaluation is finished the program can start; its execution is always modified and fitted for each customer in function of its own conditions.
5. The last step is to close the project. After executing, is time to move through the entire project and present the client a final report. The evaluation of the success of the program is presented with a final reunion of the lessons learned and the analysis of the results, the comments and possible future steps. The goal is to present a general vision of the project and if necessary and required agree to more implementations of the program.

9.3. How to implement a lean startup project in the organizations?

The basic structure of the program is the following and it is scalable according to the necessities of the client.

The program starts with the introduction of the topic and then the participants will start their real idea with the program's defined task. It is important that the objective of the program is clear to all. At the end of the day, the objective is to learn how to create a sustainable business with the clients with the usage of the lean startup methodology.

The program aims to study the focus of the lean startup, workshops, collaboration and to share ideas. All the previous actions support the cooperation, aggregate creation and the learning with the clients and other interested parts. The client decides how many events the program will have, but it is suggested that the program should have at least four workshops. However,

the program can be organized with fewer workshops if the client wants to have a shorter version. The program was then divided into four steps presented in figure 22.

Figure 22: lean startup program implementation in organizations.



Source: Author's creation

9.3.1. Internal communication

I recommend having good internal communication in all the organization prior to the beginning of the program. Its objective is presenting the program and its main objective and topic to the employees expecting and encouraging them to request it. In the case that the organization selects in advance the participants, the objective is presenting them the program and the topic in order to incentive the rest of the employees to be part of the program. The internal communication can be for instance presented through an internal newsletter, the intranet of the company and/ or through email to manager and they pass the information the their teams if needed.

9.3.2. Launch of the program

The real program starts with the initial meeting, where the objective is presenting the structure, the schedule, the objectives and the assignation of the program; as well as a brief introduction to the focus and tasks for the first lean workshop. In this initial meeting to the participants, previous studies and cases can be

requested for the next meeting where these interviews, observations or information collected will be required for the next workshop.

9.3.3. Reinforcement tasks

The program's participants begin to work in teams the workshops. The teams will be formed with people from different department or at least with different functions in the organization in order to foment the share of knowledge from different perspectives and to promote the creation of new connection and linkages between employees.

The workshops will be planned according to the resources given by the client. The agenda for the workshop will always be unique and the goal for each workshop could be different according to the quantity of workshops that will be included and their duration. The idea is that in each workshop, the teams will develop and implement changes to their ideas regarding to the task.

After each workshop, the teams share their results with the rest of the organization and with the client if possible; after which they will receive comments and suggestions to their ideas. With this the teams will enter in a cycle of feedback (collecting-measuring-learning).

The objective of the next assignment is preparing the participants to the next workshop. The assignment can include finding others ideas or tests. In this case the assessments can be videos or articles about the lean startup approach and the updated methods to design a service or process. The goal is to provide deeper comprehension of the topics to the participants and to foment mutual learning.

9.3.4. Methodology appropriation

The last step is a final presentation to the whole group and the managerial forces of the organization, or at least those in position to make decisions within the

organization. The objective is selling the ideas to the teams to encourage their development and implementation. In the stage the teams can also share their results in a presentation to other employees.

The final evaluation of the program is crucial for closure. The client and participants must provide feedback in order to evaluate the success of the program and if it achieved its objectives. It is also important to follow the learning and to do corrections in the program if necessary.

10. Pilot implementation of the Lean startup methodology proposal in a Latin American businesses.

As mentioned before there are several recommendations to make and take into account not only in small business but in any type of entrepreneurship in order to succeed and last in the market.

In order to partially apply the proposal scheme developed in the previous chapter, a company in Cali Colombia was contacted and the macro purpose/aim of the project was explained. For this case there was no monetary charge at all to the firm and the scope of the program was always customer oriented and to initiate a culture of innovation within a company. In this program every employee who enrolled into it gained capabilities that permit him/her to generate innovative ideas. These ideas were then analyzed and subject of another internal process within the company in which it will evaluate all of them, select one or two ideas, implement it/them and create a rewarding mechanism for the intrapreneurs. With this it was expected that not only the employees received benefit but also the business in general.

The company chosen was *Estacion de Servicio Mobil la Torre*, this is a big gas station located in Cali Colombia (south west of the country). In the gas station several different services are offered to clients, some of the main are: gas sell, oil change, parking for short and long duration, and carwash.

Due to the diversity of the tasks employees are divided in functional teams in which they specialize in the task developed; for instance, there is the security personnel, the gas pumping personnel, the car washers, secretaries, etc.

The company got stuck in sells and margins didn't have significant variations in a long time according to its General Manager Marly Correa.

The company was chosen since it was not evidencing any growth and was a typical LAC business that although it innovated in its beginnings ultimately was stuck and innovation was not part of the recent firm's culture.

Following the five steps of methodology proposed by the university of applied sciences in Finland in Estación de Servicio la Torre:

10.1. First step of implementation

The first step during the first encounter with the company it was deeply analysed and understood; entailing that several questions were done in order to understand their core business, their core capabilities and their weaknesses, opportunities and strengths. Some of the questions and answers were:

- a. Q: What are the different activities developed in the firm and how would you classify them from most to least relevant?

A: it is hard to classify all the activities in a ranking since there are some bureaucratic and administrative tasks that are relevant and indispensable for the business but are a little more upstream in the value chain. However the core business is undoubtedly the gas sells, after which the parking represents an important margin and it requires a higher proportion and deployment of security 24 hours, the third activity will be the oil changing, the fourth will be the car wash and last but not least the rent of the cafeteria is an important part of the revenues and furthermore is needed since clients require a leisure space where they will wait while pampering their vehicles.

- b. Q: Is the company lately subject to growth or any new project is being implemented?

A: No, the company in the last years has been stuck in growth and margins are very stable, not to say that is the best and that we will like to keep growing as it was before, but lately it is not the case. Additionally Mobil was sold to Primax, a peruvian company, this entails that the gas station will change its main supplier and also its image and corporate colors. Facing this imminent change a small event was thrown where raffles were carried and some recurrent clients were

interviewed in order to try to assess how the upcoming changes can affect sales, although some clients stated that they will stick to the gas station and its services, others however did not look pleased and manifested that they will very likely change of gas station.

The situation up to this moment is very ambiguous and we know we need to adapt to the environment and its changes and requirements.

c. Q: How is the business fostering or implementing new innovations?

A: Nowadays there is not a standard procedure to foster or implement new ideas; every worker is free to come and talk to me (manager) if he/she has an idea. We know that although we are open to listen workers we do not incentive this to happen and probably many employees do not even know that they can come and do it so they probably don't bother to communicate although they might have many thing to say. The few times that some employee come with an initiative it is pleasantly heard and if it is feasible and we consider it useful we will carry it on and additionally the employee will receive a bonus in their payroll but it is not part of any standard operational procedure, and to be honest this situation do not happen very often.

d. Q: What is the average time that employees have been enrolled to the company?

A: We like to believe that workers are happy working with us, we do not have at the moment the exact data but we have people working up to 25 years with the family group in different positions through time. There are always new employees but other as mentioned before have been part of our team for a very long time. I believe that they are happy because we care about them we try to make people feel like we care about them and we listen to them, that makes us a family and we are proud about that; we value our workers and their job.

e. Q: Do you believe that employees work pleasantly and are they being listened?

A: as said before I believe yes they are mostly happy and comfortable in their workspace, which is what encourages them to last longer with the group. This does not mean that all of our workers are old or have eternal history with our group; there are also positions where rotation is a little higher and these receive new workers.

The previous were briefly the main questions asked in order to understand the client and its modus operandi. That first meeting was very useful and was the first step to get him excited about having a second meeting.

10.2. Second step of implementation

During the second meeting the main goal was to definitely catch the client and awaken interest in him about the proposal for the implementation of an innovation program within the firm. Through this second meeting the client manifested that he did not have a broad budget since the firm was going through a lot of changes and several different projects in order to adapt to its new supplier and brand. It was also clear that the main focus was to implement the program in the operating core, in the workforce basically (at least during this first part of the plan). Estación de Servicio (E.S.) La Torre wanted to give clients a better service and to take them with them through a smooth change, but they also knew that to accomplish this it was necessary to work first with the employees that had direct contact with customers. In this case it was very useful that I developed the program at a cost zero and that the cost for ES la Torre were only those incurred in the implementation of this.

The goal was therefore to foster intrapreneurs in the operating core to enrol in the program, develop a program that will foster and encourage them to bring new ideas and to teach the firm how to carry on these projects and to reward employees who bring ideas.

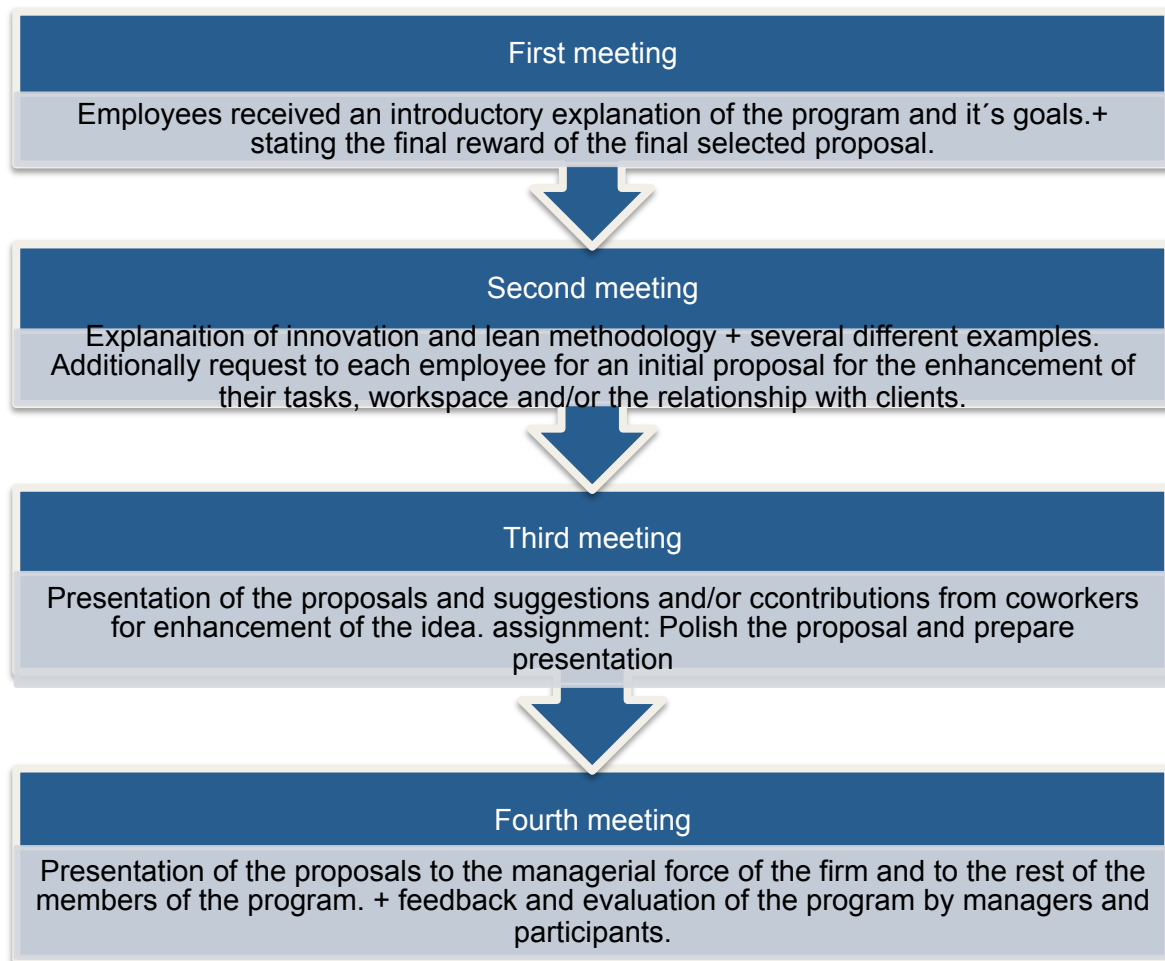
The client also stated that it was important for them to carry on this project before the change of brand happened. This entailed that while middle and top managers were taking care of the Primax changes, the core will be prepared and hopefully bring ideas to mitigate the impact generated in clients. It was an excellent opportunity for both the employees and the firm to make changes that will complement the biggest change that they will be having and they were also positive that this will also help employees to feel more listened and motivated in their jobs.

10.3. Third step of implementation

As mentioned before many changes were going to be carried by the time the program was being developed in the firm; hence, it was compulsory to start as fast as possible. The client accepted the initial proposal and not only the manager but also several other employees were excited about it.

Highlighting that each program must be adapted to the clients unique needs; firm's needs and overall situation were taken into account for the development of the schedule for E.S. La Torre scheme is deployed in figure 23. The same plan or model was carried on each of the three shifts focused mostly on the operating core.

Figure 23: Structure of lean startup program in E.S La Torre



Source: Author's creation

10.3.1. Details of E.S La Torre program

- The introductory explanation was a fast description of the program. In this part workers and employees were encouraged to participate. Another aim of these first meeting was to awaken the sense of belonging and to allow employees to think on how to better their workspace or their co-workers work day.
- A presentation and summary of the main concepts required for the development of each individual project was presented to the 84% of the workers of the operating core who were interested. In the presentation

concepts such as innovation, lean startup, intrapreneurs, and continuous improvement were explained.

- After the explanation of concepts some examples (also deployed in this document) were exposed to all the participants in order to vouch the previously presented theoretical concepts.
- During the presentation of the proposals all the participants of the program were motivated to add something or provide some kind of feedback to the projects of their colleagues.
- For the final presentation of the proposals to the management force all the proposals were requested to be sketched in a paper form and taken to the GM assistant. A meeting was arranged between both parts where they were supposed to present the proposal receive a final feedback from the management and an overall perception of the idea.
- Finally top projects and proposals were selected and management in collaboration with proposal developers created a pilot project to carry before implementation.
- The project that within a period of time of 15 days represented the best reception within clients and evidenced a higher enhancement margins in economical utilities was to be selected for further investments and development.
- All the participants of the program that presented top proposals were rewarded with a small economical amount; while proposal top winner received a bigger reward of 300,000 (three hundred thousand) COP.

10.4. Fourth step of implementation

In this phase of the program an excel file was filled in order to control the assistance and overall development of the program's participants. 35 workers subscribed to the initiative and their initial perception of it was highly positive and motivation was the main emotion after the first meeting.

During the deployment of the program the second meeting was base of incentive for workers to research and dive deeper in topics and in a margin of a week sketch up a proposal to be presented to the rest of the program's participants.

In the third meeting participants first sketched up their proposal and presented them in printed form find some of the proposals attached in annex 1,2,3, and 4. After the proposals were presented initially most of the participants remained silent after their colleagues presentations; however after the third presentation they started to interact a lot more with the methodology; suggestions and feedback for the rest of the project commenced to grow and it was evident for both mentors and participants that this stage was crucial for each of them since it was base for cooperation and enhancement of all the proposals.

Finally after the fourth meeting and after the proposals were polished with the feedback received; management selected some of the proffers to be tested with pilot projects. After this meeting it was evident that proposals were enhanced and they were a lot more structured. As part of the methodology appropriation, the top proposals selected by management are further described and summarized in english below:

1. Create a frequent client database. With this a direct contact with faithful customers will be possible and for them offers and different combo promotions were going to be designed during each season (around every two months). The diffusion of the information of the offers should be through social media especially through whatsapp or facebook. Find in annex 5 part of the initial database proposed and filled by one of the workers. The maintenance of the database should be a result of the collaboration between operating core and sales assistant. Operating core should postulate clients who they believe were part of the loyal clients

(marked with a number one in column “Habitual”) and sales assistant should corroborate their loyalty using the information collected in the system about the sales. Once a client was selected he/she should be added to the facebook of whatsapp group in order to receive the exclusive offers. This initiative was useful to incentivize sales in schedules of low demand and to increase loyalty and switching costs of these customers.

2. Design a menu (that eventually could be digital) in a laminated paper with an erasable marker attached. In this menu all services and products offered by the firm should be deployed. Each category for instance: car wash, oil products, oil changing and engine maintenance services, parking fees and time tables, etcetera will be deployed with its corresponding fee and price. Next to each product or service a small box were client could mark its desire and needs will be places and the person entailed of the initial service should give or collect this form in order to offer a more complete service. With this menu client will have a full image of the firms offer and catalogue, additionally this is something new that for sure no other gas station in the region is doing and it can enlarge the scope of loyal clients. Furthermore, this is a client oriented initiative since customers won't have to move from their position to communicate all the teams in the gas station their needs and those that can be fulfilled while he/she is for instance filling the tank will speed-up their requirements which consequently increase their satisfaction and customer experience. Find the menu design attached in annex 6.
3. Having a fidelity club. This fidelity club will work with a small card with spaces for stamps. Each card will belong to a client (identified with an identification number) or a licence plate and will expire within a period of time; in this card clients who reach a certain volume of sale in each visit will receive a stamp. The amount of stamps is equivalent to the benefit

he/she could receive. For instance if the client has four stamps he will have a bonus of 10.000 (ten thousand) COP for the next gas buy, or if he has 6 stamps he will receive a full car pampering car wash, vulcanization and vacuum. These benefits will be design by the managerial team who will design it based on statistical information collected. The menu representing the benefits obtained for each number of stamps will be deployed in different places around the firm in order to be always in sight for clients.

Find the fidelity card design in annex 7.

4. The gas station is well known for having a good festivity spirit and clients have always value that aspect and initiatives. In special dates management has always made some kind costumes for the workers and they gladly agree to wear them. The proposal of one of the workers was to not only wear costumes, but to decorate the spaces such as the petrol pumps and in order to attract more clients offer some kind of appetizer typical of the festivity for those clients who make some kind of expenditures in services of products. The specific initial proposal was to design a kind of ghost costume for petrol pumps for Halloween, and with the feedback and suggestions the proposal grew as a more macro project to be carried in different festivities.
5. Nearness offers. This proposal used the Wi-Fi network; when someone connected to the net he/she will suddenly receive current offers through e-mail; additionally their e-mail will be saved in a database to sed this clients more information about different promotions that will encourage and hopefully increase sales in low traffic hours.
6. Offering coffee and/or snacks in hours where sales are lower. This benefits can only be claimed presenting the bill of the product or service acquired in the cafeteria immediately after the purchase.

The previously presented projects as mentioned before where only some of the projects presented but these were the ones that management chose at the end of the program to be tested; Some of these where easier and faster to tests while others required more effort and investment; moreover, and to fasten and complement projects some of these were merged together since they were not mutually disruptive but they were complements.

10.5. Fifth step of implementation

At the end of the project two final meetings were programmed one with management and the second (optional) for the operative core of the firm. The purpose of these meetings was to receive feedback from them regarding the program and its results. The comments and feedback received could not be more positive, workers and management were positive about results and exited to foment innovation culture within the company; all of them expressed their happiness and satisfaction about the optimal disposition and enthusiasm. Moreover, management agreed to implement a suggestion box called *workers' voice*; In the box workers could continue adding value to the firm by formally and continuously presenting proposals; additionally in this box workers could also present complains about their workspace or things that they believe were not working properly (the last were to be reviewed by management who in innovative ways would try to solve the issues).

The document summarizing the last meeting with management is attached in annex 8. In this document management stated their satisfac0tion with the projects and manifested also briefly their intention to implement the suggestion box and the further programs name called workers' voice.

10.6. Results

- Increased participation of workers. This participation in terms of suggestions or complains.
- Development of an innovation culture through the implementation of a lean methodology within the firm.
- Satisfaction of management and workers.
- Increased motivation of working force.
- Projects increased a 14% of amount of sales in low volume hours.
- Loyalty club retained some clients that where inclined to change gas station due to change of supplier.
- Increased sales in products that did not have significant rotation.
- Clients value the initiatives and manifested it in several occasions to management and workers.
- During the program development workers encouraged friends and family to bring their CV even though during the time there were no open positions.

11. CONCLUSIONS

For all the analysis developed and presented before in this same document about the lean startup methodology and how could it be applied to the current Latino American business environment, the main conclusions are:

- The lean startup methodology suggests the launch of the business from a learning point that must be continuously validated in a cyclic process. The methodology states that it begins with the initial idea of a product or service, this is submitted to several experiments, in which it will be measured in the market to determine the interest of the potential clients. From the received feedback all the information is transformed into learning, and this is the base for the entrepreneur to keep developing his or her product or service in an iterative way. The mentioned iterations can lead to persisting in the increment of the functionalities of the product or service through some changes or pivots that conduct to a viability that lead to a business model that works without wasting resources.
- The lean startup methodology requires getting out and watching clients from day one of the implementation. After which validated learning must happen in order to grow/ progress continuously
- The Lean startup methodology is built around five principles (Edison, 2015) presented below:
 - Entrepreneurs are everywhere. Anyone can be an entrepreneur without owning a business; in fact a student or an employee within a corporation can be or become one.

- Entrepreneurship is management. A startup should never be seen as only about product development but also about business development.
 - Validated learning. To build sustainable businesses, entrepreneurs should run experiments and validate what customers need. Therefore, they reveal current and future business prospects.
 - Build-Measure-Learn. This should be the fundamental activity of a startup. To perceive customer value, an entrepreneur should start a feedback loop that turns an idea into a product then learn whether to pivot or persevere. To determine which one of the previous action possibilities to take, the entrepreneur should develop a minimum viable product (MVP) using an agile development method. MVP is used as a tool to collect customer feedback on the product. Furthermore, the feedback is used to create and diffuse learning through the organization; possible through the analysis; and the learning collected is posteriorly used to improve the product. Through customer feedback, a startup can also validate their hypotheses. As the result, the startup might pursue a new direction of the business or continue and scale the current one. The Pivoting process is almost compulsory for any startup since it will prevent the startup from falling in bankruptcy if time between pivots is minimised.
 - Innovation accounting. To improve the outcomes, entrepreneurs must empirically and continuously measure and communicate the real progress of innovation.
- The lean startup methodology has been disaggregated following a suggested sequence in order to start a business:

1. Validation of the hypothesis: Validating the assumptions from which the process commences, since they are assumptions that must be confirmed through contrasting them with the market and the client. Hence, it is recommended to use some of the business model canvas developed by experts, or at least create and be clear about the conception of business model.
 2. Creation of an MVP (minimum variable product): creating a product with some minimum characteristic that provide value to the client and that allow the launching part to obtain as much information as possible from the market segment at which it aims.
 3. Measuring: establishing elements that permit the quantification, a measurement of the expected performance in order to make opportune and accurate decisions.
 4. Pivot or persevere: the acquire knowledge through iterations will permit the enhancement of what works and the functionalities, and will guide to perseverance in the implementation of changes through pivoting. The previous based on the data and information obtained.
- In Latin America there is a concerning disproportional or inadequate allocation of the expenditures that is causing that the number of innovations born in the region do not emerge.
 - Implementing the lean startup methodology is a way to advance in the corporative world in an agile, flexible and profitable way; evidence of this are the cases presented prior in this same document. Latin-America must embark in an innovation route; possible only if two scenarios surge simultaneously with the support of the government; first facilitating the

launch of new businesses whose owners are new entrepreneurs; and second supporting and promoting that big established companies begin to be innovative in order to compete globally.

Companies such as GE or Procter & Gamble are betting in innovation, not only in the design, but also in the way of working and how to understand the client's necessities. Accordingly, this work emphasizes the necessity to develop a corporate environment that promotes the generation of new ideas, reducing unnecessary procedures and supporting new leaders that use technological tools to analyze data about their clients to propose products that are almost tailor made to their clients' necessity.

All the previous emphases are expected to result in the increase of sales, utility and dividends; moreover they can also result in the enhancement of the job offer for new professionals.

- Assuming and accepting the Lean startup methodology from a managerial level, keeping as a main aim the intention of using new practices for the development of products or services, is undoubtedly a success since the method will generate benefits that can be addressed from three areas: optimization of resources, reduction of times and synchronization with the market.
 - Optimization of resources: The firm will gain the ability of efficiently using its risk capital considering that the development and usage of an MVP will generate lower costs and provide key market information to accurately and promptly implement adjustments. Additionally, in relation to the level of acceptance of the product by the client, the firm can generate premature invoicing or the offer.
 - Time reduction: Time to markets can be reduced since the understanding of the client is achieved in a faster way; consequently the production or implementation of the changes are

implemented faster and the overall time to market is benefited from it in any industry. However, the clearest example of the improvement in this area of the business can also be evidenced in the automotive industry, where firms in traditional contexts demand years to develop a new model or a successful vehicle line. With the implementation of the Lean startup methodology

- Synchronization with the market: Once the lean startup methodology is assumed it will definitely increase the synchronization with the market since it is based in client's feedback and in cycles of improvement of adaptation. Being this cycles a series of short steps to pivot or persist if the market evidence any change it is easily and promptly identified in order to change with it and adapt constantly to its dynamism. In the case of mature companies that already have mature, stable, star or cash cows products or services (that have generated and identity and brand positioning in the market); assuming the Lean startup methodology is necessary and useful since it helps them to diversify and have a growth of their portfolio adapting to the market.
- In the sectors where the lean startup methodology or at least some of the concepts or proposals of it have been applied, its growth has been accelerated since the consolidation of both the products/ services and consequently the companies' names have been rapidly achieved.
- Companies' that have implemented Lean startup methodology have increased their financial assets and reduced the time to market of their product as a result of their reduction of the time of product development. This methodology has shown entrepreneurs in a short period of time if their products or new business model is fit with the market (there is a

demand for the entrepreneur's idea) and will generate economic retributions or benefits in general.

- The research and present project leaves open a further study that will investigate in more depths the lean startup methodology put into practice. Moreover, a comparative study on more Latin American companies that successfully implemented the lean startup methodology will be complement for the investigation here deployed.
- Finally it is to state that The Lean Methodology, without a doubt, offers a great opportunity to approach innovative businesses and minimize the uncertainty, the waste of resources and the high risk that the entrepreneurship or endeavour usually entails.
- Previously mentioned conclusions were proved by the implementation of the project in E.S. La Torre. During this implementation it was evidenced that projects could be proved faster and in a more economical way with pilot projects. Moreover, it also proved the importance of innovation within the company and the importance of giving a voice to workers not only in crisis times but always.

12. References

- Alcaraz, R. (1998). El emprendedor de éxito. México: Mc Graw Hill
- Álvarez, A., De las Heras, R. y Lasa, C. (2012). Métodos ágiles y scrum. Madrid: Anaya.
- Banco Interamericano de Desarrollo (2010). Ciencia, Tecnología e Innovación en América Latina y el Caribe. Un compendio estadístico de indicadores.
- Bhide, A. (1999) The origin and evolution of new businesses, Oxford University Press: Oxford.
- Blank, S. G. (2006). The Four Steps to the Epiphany. Foster City, Calif.: Cafepress.com.
- Blank, S. (2013). Spotlight on entrepreneurship: Why the *Lean startup* changes everything. Harvard Business Review. May.
- Blank, S. & Dorf, B. (2012). The startup owner's manual: The step-by-Step Guide for Building a Great Company. United States: K&R Ranch, Inc.
- Chandy, R. & Tellis, R. (2000). The incumbent's curse? Incumbency, size and radical product innovation. Journal of Marketing, 64(3):1–17.
- Chiavenato, I. (1993). Iniciación a la organización y Técnica Comercial. Mc Graw Hill.
- Christensen, C. (1997). The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. Harvard Business Press.

Christensen, C.M. and Kaufman, S. P. (2008). Innovation Killers: How Financial Tools Destroy Your Capacity to Do New Things. Harvard Business Review. January

Croll, A. y Yoskovitz, B. (2014). Lean analytics. España: Universidad Internacional de La Rioja

Day, J. D. and Mang, P. Y. (2001). The innovative organization: Why new ventures need more than a room of their own. McKinsey Quarterly. May

Drucker, P. 2007. Innovation and entrepreneurship. New York: Elsevier Ltd.

Edison, H., Abrahamsson, P., Wang, X. (2015). Lean Startup: Why Large Software Companies Should Care

Ellis, S. (2011). The Startup Pyramid. Retrived from: <http://startup-marketing.com/the-startup-pyramid/>

Emiliani, M.L. (2006) 'Origins of lean management in America: The role of Connecticut businesses', Journal of Management History, Vol. 12, No. 2, pp. 167-184.

Ghemawat, P (2001). Market incumbency and technological inertia. Marketing Science, 10:161–171.

Glaveski, S. (2016). The one metric that matters for corporate innovation. Retrived from: <https://medium.com/steveglaveski/the-one-metric-that-matters-for-corporate-innovation-a3ef1ed7ea6d>

González, O. (2017). Creación de una Empresa bajo la Metodología *Lean Startup*: El caso de Next2Me. Emprendimiento de Negocios. Universidad de Sevilla. España.

Gustafsson, A. & Qvillberg, J. (2012). Implementing *Lean Startup* Methodology. Chalmers University of Technology. Sweden.

Hämäläinen, H. (2014). *Lean Startup* approach for innovative corporate culture. Laurea University of Applied Sciences

Harvard University (2016). The Limits of the Lean Startup Method. Retrived from: <https://hbr.org/2016/03/the-limits-of-the-lean-startup-method>

Hernández, A. (2017). Diseño de un plan de negocio de un startup de base tecnológica. Trabajo Fin de Grado. Universidad Politécnica de Valencia.

IDaccion, Business News. (2018). Latinoamerica es territorio Startup. Retrived from: <http://idnews.idaccion.com/latinoamerica-es-territorio-startup/>

Instituto Lean Management (n. d.). ¿Que es Lean? Retrived from: <http://www.institutolean.org/es/acerca-de/que-es-lean/70-definicion>

Inter-American Development Bank (2016). Firm Innovation and Productivity in Latin American and the Caribbean, The engine of Economic Development , DOI: 10.1057 / 978-1-349-58151-1

Laurea (2014). Lean startup approach for innovative corporate culture. Degree programme in Service Innovation and Design.

Llamas Fernández, F. J. y Fernández Rodríguez, J. C. (2018). La metodología *Lean Startup*: desarrollo y aplicación para el emprendimiento. Revista EAN, 84, (pp 79-95). Retrived from: <https://doi.org/10.21158/01208160.n84.2018.1918>

Kahn E. (2007), *Innovate or Perish: Managing the Enduring Technology Company in the Global Market*.

Karlsson, J (2012). *Implementing Lean Startup Methodology in Large Firms*. Chalmers University of Technology.

Macías, M. (2015). *Advenio. Strategy & Business Design*. Retrived from: *Advenio. Strategy & Business Design*: <http://advenio.es/lean-canvas-una-fusion-entre-el-lienzo-del-modelo-denegocio-y-lean-startup/>

Macías Rodríguez, M. (2017). *El camino para innovar: cómo pasar de la idea al modelo de negocio creando valor para tus clientes*. Barcelona: Deusto.

Maurya, A. (2012). *Running Lean: Iterate from Plan A to a Plan That Works*. United States: O'Reilly Media, Inc.

Maurya, A., Ries, E. y Marqués, M. (2014). *Running Lean: cómo iterar de un plan A a un plan que funcione*. España: Universidad Internacional de La Rioja.

McClure. D. (2010). *Startup metrics for pirates*. Retrived from: <https://es.slideshare.net/dmc500hats/Startup-metrics-for-pirates-long-version>

Mohambir Sawhney, R. C. (2006). *The 12 different ways for companies to innovate*. MIT SMR.

Mohout, O.: *Startup master class ii: Exodus – problem-solution fit* (2015). Retrived from: <http://www.slideshare.net/omohout/exodus-problem-solution>

Navarro, J. C., J. J. Llisterri y P. Zúñiga (2010). "The Importance of Ideas: Innovation and Productivity in Latin America". En: PAGÉS, C. (Ed.) *The Age of Productivity: Transforming Economies from the Bottom Up*. Washington, DC, Banco Interamericano de *Desarrollo-Palgrave-Macmillan*.

Osterwalder, A. y Pigneur, Y. (2011). *Generación de modelos de negocio*. Barcelona: Planeta.

Pinchot, G. (1985). Introducing the 'intrapreneur': Successful innovation in large companies sometimes function as in-house entrepreneurs, running projects as independent innovators would. *IEEE Spectrum*, 22(4):74–79.

Raatikainen, M., Komsa, M., Kiljander, H., Hokkanen, L., Märijärvi, J. & Mohout, O. (2016). *Eight Paths of Innovations in a Lean Startup Manner: A Case Study*. Springer International Publishing AG 2016

Ries, E. (2010). *The Lean Startup*. Retrieved from: <http://theleanstartup.com/>

Ries, E., Eisenmann, T., & Furr, N. (2011). *Lean Startups*. Unpublished article.

Ries, E. (2011). *The lean startup: how today's entrepreneurs use continuous innovation to create radically successful businesses*. New York: Crown Business.

Ries, E. (2009). *Minimum Viable Product: A guide*. Retrieved from: <http://www.Startuplessonslearned.com/2009/08/minimum-viable-product-guide.html>

Ries, E. (2012). *El método Lean Startup*. Barcelona: Deusto.

Rodríguez, A. (2017). Juicero: de 100 a 0 en cuestión de segundos. Retrived from: <https://hipertextual.com/2017/09/origen-caida-juicero>

Rogers, E. (2003). Diffusion of innovations. New York: Free Press.

Rogers, M. (1998) The Definition and Measurement of Innovation. Melbourne Institute Working Paper No. 10.

Ross, J. (1987). Corporations and entrepreneurs: Paradox and opportunity. Business Horizons, 30(4):76–80.

Schumpeter, J. (1942). Capitalism, Socialism and Democracy. New York: Harper & Brothers

Sharkey, M. (2013). 6 things wrong with the ‘Lean Startup’ model (and what to do about it). Retrived from: <https://venturebeat.com/2013/10/16/lean-startups-boo/> [20/12/2017].

Siemens (2017). 5 tendencias tecnológicas que van a revolucionar nuestra vida en el 2025. Retrived from: <https://ciudadesdelfuturo.es/05-tendencias-tecnologicas-van-revolucionar-nuestra-vida-2025.php>

Thiel, P., Masters, B.: Zero to One: Notes on Startups, or How to Build the Future. Crown Business, New York (2014)

Tidd, J., Bessant, J. and Pavitt, K. (1997) Managing Innovation: Integrating technological, market and organizational change. Chichester: John Wiley.

Torre, N. (2013). *Lean Startup* y Business Model Canvas: confusión habitual entre el todo y una parte. Retrived from:

<http://www.leanstart.es/leanstartup-y-business-model-canvas-confusion-habitual-entre-el-todo-y-unaparte/>

Tushman. M. L., and Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, vol. 31, pp. 439-65.

Ulwick, A. W. (2002). Turn Customer Input into Innovation. *Harvard Business Review*, January.

Ulwick, A. (2006). What customers want: Using outcome-driven innovation to create breakthrough products and services. United States: The McGraw-Hill Companies, Inc.

Womack, J. (2003). *Lean thinking: banish waste and create wealth in your corporation* (2 ed.). New York: Free Press.

Xavier, J. (2012, septiembre 21). 75% of Startups fail, but it's no biggie. Retrived from: <https://www.bizjournals.com/sanjose/blog/2012/09/mostStartups-fail-says-harvard.html>

Womack, J. & Jones, D. 2003. *Lean Thinking. Banish waste and create wealth in your corporation*. New York: Free Press.

13.ANNEX

ANNEX 1

1. Hacer eventos los días menos movidos en la estación de servicio.
2. Comprar Para cada Islera un limpia vidrios para ofrecerle un servicio adicional al cliente, y que ella se haga responsable de su elemento de trabajo.
3. Cuando haya Súper que ella sea la encargada de limpiar los vidrios, repartir tintos en la mañana y refrescos en la tarde. Así brindaremos un mejor servicio a los clientes.
4. Que la Súper se vista diferente a la que maneje la isla, puede ser con un short negro, blusa blanca y visera blanca.

Itzi Blanca Castillo Muñoz

cc 59.680200

ANNEX 2

PROPUESTAS

Como primer punto, para que haya un mayor movimiento de clientes en el establecimiento, es importante que los días sábado se tome como estrategia que las vendedoras de servicio se pinten la cara de payaso, el señor Andrés Felipe y la súper realicen las encuestas.

También es un punto importante el obsequiarle a los clientes pequeñas agendas con el logotipo de la torre, bayetillas y pequeñas rifas.

Para una mayor venta en la isla 4 es importante promover la promoción y dar a conocer más la lubríteca con una pequeña rebaja en los cambios de aceite, motivar a los clientes con una rifa de una taqueada de combustible, la cual permite crear fidelidad.

Es importante resaltar que el cliente busca economía y rapidez en el servicio.

Y por último que se repartan golosinas con una feliz sonrisa.

Ly Adriana Ovesada Rodríguez
66 912 505

ANNEX 3

1. Identificar el cliente fiel, que siempre viene a la estación y hace tanqueos por un valor significativo, para obsequiarle boletas de cine.
2. El día que este la súper, que se vista muy ~~hermosa~~ hermosa con un traje llamativo, Y reparta dulces a todos los clientes.
3. Regalar obsequios, como lapiceros con el logotipo de la estación de servicios.

Didia C Palacios
C.C. 67. 941 464

ANNEX 4

MEJORAMIENTO CALIDAD DE FUNCIONALIDAD DEL NEGOCIO

Las falencias en las empresas de servicios se soportan en la

Determinación

Forma

Actitud

Trato

Y demás factores de interacción con el cliente y razón social de un establecimiento de comercio.

Los empleados como soporte fundamental de éxito de las empresas de esta índole se están buscando alternativa de mejoramiento funcional para crecimiento personal y empresarial que se refleje positivamente en los niveles de ventas.

La "actitud" de los vendedores se ve afectada y condicionada por diferentes factores de prestación de servicio como son

- tiempo de permanencia en el sitio de pie
- condiciones climáticas de altas temperatura
- trato interpersonal de los clientes

Todo lo anterior genera condiciones de stress razón por la cual se está implementando pausas activas por altavoz en el área de ventas colocando música alegre dirigiendo movimientos generales del cuerpo.

"Es tiempo de tomar la pausa activa

Ejercicio número 1 para activar los miembros inferiores

1 Nos ponemos de pie espalda y cabeza recta, separamos los piernas al ancho de los hombros, llevamos las manos a la cintura, para hacer los siguientes ejercicios, levantamos los talones y nos ponemos en la punta de los pies durante 5 segundos, levantamos la puntas de los pies para quedar apoyados en los talones 5 segundos, se repite las secciones por tres veces.

INICIO

Puntas de los pies 1, 2, 3, 4,5 se repiten 3 veces

Talones 1.2.3.4.5 se repiten 3 veces

EJERCICIO NUMERO 2

Para estirar los músculos de la cadera y espalda

Nos ponemos de pie espalda y cabeza recta, separamos las piernas al ancho de los hombros, llevamos las manos a la cintura, para hacer los siguientes ejercicios, giramos la cadera en círculo primero hacia el lado derecho 5 veces y luego hacia el lado izquierdo 5 veces se realizan así.

Posición inicial

Primero a la derecha 1, 2, 3, 4,5

A hora a la izquierda 1, 2, 3, 4,5

EJERCICIO NÚMERO 3

Para calentamiento articular de hombro y estiramiento de musculo de la espalda.

Nos ponemos de pie espalda y cabeza recta separamos las piernas al ancho de los hombros, ponemos las manos entre las partes lateral y anterior de las piernas e iniciamos el ejercicio así

Sin separar las manos de las piernas hacemos círculos con los hombros hacia delante 5 veces y luego hacia tras 5 veces más.

Posición inicial

Hombros hacia delante 1, 2, 3, 4,5

Hombros hacia tras 1, 2, 3, 4,5

EJERCICIO NUERO 4

Para estiramiento de cuello

Nos ponemos de pie espalda y cabeza recta, separamos las piernas al ancho de los hombros, ponemos las manos sobre las piernas e iniciamos el ejercicio así.

giramos la cabeza al lado derecho y la mantenemos 3 segundos en esta posición, a hora giramos la cabeza al lado izquierdo y la mantenemos 3 segundos así , inclinamos la cabeza al lado derecho para tocar el oído con el hombro derecho lo mantenemos tres segundos , inclinamos la cabeza al lado izquierdo para tocar el oído con el hombro izquierdo y lo mantenemos 3 segundos , llévanos la cabeza hacia abajo para tocar el pecho con el mentón lo mantenemos 3 segundo , levantamos la cabeza a la posición inicial.

INICIO

Giro cabeza a la derecha 1, 2,3

Giro cabeza a la izquierda 1, 2,3

Inclinación cabeza a la derecha 1, 2,3,

Inclinación cabeza a la izquierda 1, 2,3

Inclinación cabeza abajo 1, 2,3

Y luego posición inicial.

REALIZAR ENCUESTAS

Estas encuestas sirven para conocer cuáles son las falencias en las cuales hay que trabajar para ofrecer un mejor servicio al cliente.

ANEXO

Cuadro de encuestas

A handwritten signature in dark ink, featuring a large, stylized initial 'R' followed by several loops and a horizontal line extending to the right.

ANNEX 6



LUBRICANTES MOTORES A GASOLINA

<input type="checkbox"/>	Cuarto de M1-0W40	\$35.450
<input type="checkbox"/>	Cuarto de M. SUPER 2000 10W30	\$24.600
<input type="checkbox"/>	Galón de M. SUPER 2000 10W31	\$89.800
<input type="checkbox"/>	Cuarto de MSUPER 1000 20W50	\$21.950
<input type="checkbox"/>	Galón de MSUPER 1000 20W50	\$79.350
<input type="checkbox"/>	Cuarto de M25W50 ALTO K/MTJ	\$17.000
<input type="checkbox"/>	Galón de M25W50 ALTO K/MTJ	\$61.900
<input type="checkbox"/>	Cuarto de HD 50 SPECIAL	\$13.150
<input type="checkbox"/>	Galón de HD 50 SPECIAL	\$52.550

LUBRICANTES MOTORES A DIESEL

<input type="checkbox"/>	Cuarto de DELVAC MX 15W40	\$18.200
<input type="checkbox"/>	Galón de DELVAC MX 15W40	\$71.400
<input type="checkbox"/>	Cuarto de DELVAC 1350	\$15.450
<input type="checkbox"/>	Galón de DELVAC 1350	\$54.750

LUBRICANTES MOTORES A 2 Y 4 TIEMPO

<input type="checkbox"/>	Cuarto de OUTBOARD 50.1	\$16.750
<input type="checkbox"/>	Pinta de OUTBOARD 50.1	\$8.850
<input type="checkbox"/>	Cuarto de SUPER EXTRA 2T	\$16.800
<input type="checkbox"/>	Pinta de SUPER EXTRA 2T	\$9.400
<input type="checkbox"/>	Cuarto de SUPER 2T 30.1	\$14.400
<input type="checkbox"/>	Pinta de SUPER 2T 30.1	\$7.150
<input type="checkbox"/>	Cuarto de SU MOTO 4T MX 10W30	\$18.800
<input type="checkbox"/>	Cuarto de SUPER MOTO 4T 20W50	\$16.600

LUBRICANTES PARA CAJA DE TRANSMISION/DIFERENCIALES

<input type="checkbox"/>	Cuarto de ATF D/F	\$25.450
<input type="checkbox"/>	Cuarto de MOBILUBE 80W90	\$15.000

VARIOS

<input type="checkbox"/>	Liqui. Frenos dot 3	\$5.200
<input type="checkbox"/>	Agua para bateria	\$1.200
<input type="checkbox"/>	Aditivo gasolina	\$7.500
<input type="checkbox"/>	Aditivo diesel	\$9.100
<input type="checkbox"/>	Tanque auxilio	\$2.000
<input type="checkbox"/>	Aditivo moto	\$3.100
<input type="checkbox"/>	Litro aditivo radiador lubriston	\$5.650
<input type="checkbox"/>	Elevador de octanaje	\$9.000
<input type="checkbox"/>	Limpiador de inyectores	\$9.950
<input type="checkbox"/>	Litro de limpia vidrios	\$5.000
<input type="checkbox"/>	Limpiador electronico	\$10.500
<input type="checkbox"/>	Limpiador para frenos crc	\$9.903
<input type="checkbox"/>	Aditivo motorkote maximun	\$8.500
<input type="checkbox"/>	Silicona citrica automotriz	\$6.550
<input type="checkbox"/>	Lava motor crc	\$11.500
<input type="checkbox"/>	Restaurador de partes negras	\$10.258



Lavadero

<input type="checkbox"/>	Lavada General	\$10.000
<input type="checkbox"/>	Petrolizada	\$3.000

MOTO

<input type="checkbox"/>	Lavada General	\$10.000
<input type="checkbox"/>	Rasqueteada	\$9.500
<input type="checkbox"/>	Petrolizada	\$4.000
<input type="checkbox"/>	Lavada Motor	\$9.000

TAXI

<input type="checkbox"/>	Lavada General	\$12.000
<input type="checkbox"/>	Rasqueteada	\$12.000
<input type="checkbox"/>	Petrolizada	\$5.500
<input type="checkbox"/>	Lavada Motor	\$8.000

PARTICULAR

<input type="checkbox"/>	Lavada General	\$16.000
<input type="checkbox"/>	Rasqueteada	\$14.000
<input type="checkbox"/>	Petrolizada	\$6.500
<input type="checkbox"/>	Lavada Motor	\$8.000

CAMPERO

<input type="checkbox"/>	Lavada General	\$20.000
<input type="checkbox"/>	Rasqueteada	\$15.000
<input type="checkbox"/>	Petrolizada	\$7.500
<input type="checkbox"/>	Lavada Motor	\$8.000

COLECTIVO

<input type="checkbox"/>	Lavada General	\$35.000
--------------------------	----------------	----------

CAMION

<input type="checkbox"/>	Rasqueteada	\$25.000
<input type="checkbox"/>	Petrolizada	\$8.000
<input type="checkbox"/>	Lavada Motor	\$12.000

MICROBUS

<input type="checkbox"/>	Lavada General	\$20.000
<input type="checkbox"/>	Rasqueteada	\$20.000
<input type="checkbox"/>	Petrolizada	\$7.500
<input type="checkbox"/>	Lavada Motor	\$9.000

BUS

<input type="checkbox"/>	Lavada General	\$35.000
<input type="checkbox"/>	Rasqueteada	\$25.000
<input type="checkbox"/>	Petrolizada	\$10.000
<input type="checkbox"/>	Lavada Motor	\$15.000

BUSETA

<input type="checkbox"/>	Lavada General	\$25.000
<input type="checkbox"/>	Rasqueteada	\$27.000
<input type="checkbox"/>	Petrolizada	\$7.000
<input type="checkbox"/>	Lavada Motor	\$13.000

DOBLETERO

<input type="checkbox"/>	Lavada General	\$65.000
<input type="checkbox"/>	Rasqueteada	\$55.000
<input type="checkbox"/>	Petrolizada	\$15.000
<input type="checkbox"/>	Lavada Motor	\$18.000

TRACTOMULA GENERAL

<input type="checkbox"/>	Lavada General	\$93.000
<input type="checkbox"/>	Rasqueteada	\$63.000
<input type="checkbox"/>	Petrolizada	\$20.000
<input type="checkbox"/>	Lavada Motor	\$20.000
<input type="checkbox"/>	Juagada	\$55.000

Parqueadero

MOTO

<input type="checkbox"/>	Contrato 12 horas	\$65.150
<input type="checkbox"/>	Contrato 24 horas	\$121.590
<input type="checkbox"/>	Hora secilla	\$3.400

AUTOMOVIL

<input type="checkbox"/>	Contrato 12 horas	\$113.400
<input type="checkbox"/>	Contrato 24 horas	\$207.900
<input type="checkbox"/>	Hora secilla	\$4.400

MOTOCARRO

<input type="checkbox"/>	Contrato 12 horas	\$105.000
<input type="checkbox"/>	Contrato 24 horas	\$193.200
<input type="checkbox"/>	Hora secilla	\$4.400

CAMIONETA

<input type="checkbox"/>	Contrato 12 horas	\$120.750
<input type="checkbox"/>	Contrato 24 horas	\$221.550
<input type="checkbox"/>	Hora secilla	\$4.400

BUS/BUSETA/FURGON/TURBO GRANDE O CAMION MEDIANO

<input type="checkbox"/>	Contrato 12 horas	\$147.000
<input type="checkbox"/>	Contrato 24 horas	\$270.900
<input type="checkbox"/>	Hora secilla	\$7.400

BUS/BUSETA/FURGON/TURBO MEDIO O CAMION PEQUEÑO

<input type="checkbox"/>	Contrato 12 horas	\$131.250
<input type="checkbox"/>	Contrato 24 horas	\$241.500

<input type="checkbox"/>	hora secilla	\$7.400
--------------------------	--------------	---------

BUS/BUSETA/FURGON/TURBO PEQUEÑO

<input type="checkbox"/>	Contrato 12 horas	\$120.750
<input type="checkbox"/>	Contrato 24 horas	\$221.500
<input type="checkbox"/>	Hora secilla	\$7.400

CAMION GRANDE

<input type="checkbox"/>	Contrato 12 horas	\$189.000
<input type="checkbox"/>	Contrato 24 horas	\$346.500
<input type="checkbox"/>	Hora secilla	\$7.400

VOLQUETA GRANDE

<input type="checkbox"/>	Contrato 12 horas	\$189.000
<input type="checkbox"/>	Contrato 24 horas	\$246.500
<input type="checkbox"/>	Hora secilla	\$7.400

VOLQUETA SENCILLA

<input type="checkbox"/>	Contrato 12 horas	\$147.000
<input type="checkbox"/>	Contrato 24 horas	\$270.900
<input type="checkbox"/>	Hora secilla	\$7.400

DOBLETROQUE

<input type="checkbox"/>	Contrato 12 horas	\$220.500
<input type="checkbox"/>	Contrato 24 horas	\$405.300
<input type="checkbox"/>	Hora secilla	\$9.500

TRACTOMULA/ TRAILER/ CAMA BAJA

<input type="checkbox"/>	Contrato 12 horas	\$241.500
<input type="checkbox"/>	Contrato 24 horas	\$443.100
<input type="checkbox"/>	Hora secilla	\$23.500



Combustible

Galón de EXTRA	\$12.980
Galón de CORRIENTE	\$9.440
Galón de DIESEL	\$9.130
Galón de SUPREME	\$9.700
Galón en promoción de CORRIENTE	\$9.140
Galón en promoción de DIESEL	\$8.920



ANNEX 7

	<p>ESTACION DE SERVICIO LA TORRE</p> 
<p>NUMERO ID:</p> <p>FECHA:</p>	

ANNEX 8

Santiago de Cali septiembre 09 del 2019

Asunto:

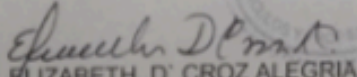
Proceso de selección de proyecto de innovación de la empresa ESTACIÓN DE SERVICIO LA TORRE.

Por medio del presente expreso los diferentes procesos y resultados obtenido con las propuestas de algunos proyectos de innovación de nuestros colaboradores.

Para obtener el proyecto ganador se tuvo en cuenta varias propuestas, de los cuales se seleccionaron las mejores con el fin de fomentar la innovación en la empresa. La propuesta ganadora se llevó a cabo obteniendo resultados positivos, debido a ello fue acogido por todos los trabajadores, agradecimiento que fue expresado a través de un buzón de sugerencia llamado la voz del trabajador.

La estrategia de tener en cuenta a los colaboradores en los proyectos de innovación de la empresa, ha sido de gran ayuda, ya que por ello han adquirido sentido de pertenencia hacia la entidad y se ha generado un ambiente laboral más sano.

Cordialmente


ELIZABETH D' CROZ ALEGRIA
Administrador

